CREDA

Remote Micro Hydro

CREDA is a program which has been jointly funded by Energy, Mines and Resources, Canada and the Yukon Government, Department of Economic Development and Tourism. For more information or copies of reports contact the Energy and Mines Branch, Yukon Government, Box 2703, Whitehorse, Y1A 2C6,

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1. FOREWORD

The availability of secure and affordable energy supplies is a subject of national concern. Our primary energy sources are becoming more costly and less accessible. However, Canada has both the resources and technical expertise needed to develop renewable and alternative sources of energy.

The governments of Yukon and Canada have entered into a Conservation and Renewable Energy Demonstration Agreement as one means of pursuing this end. Cost shared by the territorial and federal governments, CREDA has a budget of $4.4 million and is dedicated to the development and demonstration of conservation and renewable energy technologies.

The objectives of CREDA are:

- To develop and demonstrate promising new technologies, which, when widely adopted, will exploit renewable resources, conserve energy and/or use energy more efficiently.
- To develop broad public awareness of the potential of renewable energy and conservation technology.
- To provide opportunities for the commercial application of the technologies.
- To create economic spin-off benefits for manufacturing, industry and commerce.
- To create employment in new or existing energy-related industries.

The micro-hydro project which is reported on in the following pages demonstrates the technical and institutional procedures for developing electrical power from a small stream. There are few cost effective alternatives to the expensive hydro and diesel generated power in the Yukon, but this project, as the first of its kind, demonstrates the feasibility of producing power on a small scale for private end use. This project has also streamlined the legal obstacles in obtaining permits to enable similar projects to proceed more smoothly.

2. EXECUTIVE SUMMARY

The micro-hydro project, built on a small tributary of Cowley Creek, near Whitehorse, Yukon, is an important step in the development of alternative energy sources and in conserving expensive diesel fuel. In addition to demonstrating the technical aspects of harnessing water power, the project paved the way for easier regulatory procedures.

The power will be generated by a 9 metre head and a 6" crossflow turbine. The 36 v DC power will be stored in three 12 v batteries and converted to AC on demand by a 3,800 watt inverter. The system will produce 1.6 kW or 14,016 kWh per year with a firm flow of 1.26 cfs. This is sufficient to supply electricity for household needs and a wood working shop.

The project is expected to cost about $18,000 and is considered more economical than tying into the present grid system, or continuing to use a gasoline generator.

An environmental study determined that any impact of the project on the stream would be negligible. There are no fish at the micro-hydro location. It is expected that no other water users will be affected by the project.

The project is 90% completed at the time of writing, and therefore not in operation. It is expected the work will be completed and the hydro system operational by March 31, 1985.

There is great potential for micro-hydro projects in the Yukon where electrical power rates are ever increasing and there is an abundance of suitable streams.

2. Résumé pour l'exécutif

Le mini-projet hydro-électrique érigé sur un affluent du ruisseau Cowley, près de Whitehorse, au Yukon, constitue un pas important dans le développement des sources énergétiques de rechange et la conservation du gas-oil qui coûte très cher. En plus de démontrer les aspects techniques liés à l'exploitation de la puissance hydraulique, le projet a frayé la voie à l'introduction de procédures plus simples en matière de réglementation.

L'énergie hydro-électrique sera produite par une chute d'eau de 9 mètres de haut activant une turbine hélicoïdale de 6". Les 36 volts d'énergie électrique en courant continu seront emmagasinés dans 3 accumulateurs d'une capacité de 12 volts chacun, et cette énergie pourra être transformée, sur demande, en courant alternatif au moyen d'un convertisseur statique de 3.800 watts. L'ensemble du système produira 1,6 kW ou 14.000 kWh annuellement, avec un débit constant de 1,26 cfs. Ceci fournira amplement d'électricité pour les besoins d'une maisonnée et d'un atelier d'ébénisterie.

On prévoit que le projet coûtera environ 18.000$ et l'on croit qu'il sera plus économique que de se brancher au réseau électrique existant ou de continuer à utiliser une génératrice à essence.

Une étude faite sur l'environnement a conclu que quelqu'impact qu'aurait le projet sur le ruisseau, celui-ci serait négligeable. Il n'y a pas de poisson à l'emplacement du mini-projet hydro-électrique. On croit qu'aucun autre utilisateur de l'eau ne sera affecté par le projet.

Au moment de la rédaction de ce texte, le projet n'est complété qu'à 90% et de ce fait, n'est pas opérationnel. Il est prévu que le projet sera terminé et que le système hydro-électrique sera fonctionnel dès le 31 mars 1985.

Il y a de grandes possibilités pour des mini-projets hydro-électriques de ce genre au Yukon où les coûts de l'énergie électrique augmentent sans cesse et où il y a abondance de cours-d'eau exploitables.

4. INTRODUCTION

The following report describes the development of a micro-hydro project on an unnamed tributary of Cowley Creek, 30 km south of Whitehorse, on the Carcross Road. The project is designed to generate 14,016 kWh per year, which will supply enough electricity for household needs and a woodworking shop. The micro-hydro system is considered more economical than tying into the present grid system of Yukon Electrical Co. Ltd., or continuing to use a gasoline generator.

Besides being a demonstration project for the technical feasibility of micro-hydro systems, the project served to reveal the long and involved regulatory process in obtaining a water use licence. The fundamental problem is that there was, at the time, no proper guidelines or authority for dealing with the project which was the first of its kind. As a result, the Yukon Territory Water Board, in conjunction with the Economic Development Branch of the Government of Yukon, has undertaken to streamline the process for further similar developments.

A Hydromite low head turbine, chosen for its unique ability to operate efficiently with a nine metre (m) head, was the only possible generating system for this project. The generator, which transforms the mechanical power of the turbine into electricity, is a 36 v DC brushless generator. Excess power will be stored in three 12 v batteries and inverted, by a Best M36-3800 watt inverter, on demand to AC cycle to suit the household appliances and workshop equipment.

The project is seen as a viable source of inflation-proof power, which, hopefully, can inspire similar micro-hydro systems to help replace expensive diesel generated electricity.

5. SITE DESCRIPTION

The micro-hydro project is situated on an unnamed tributary of Cowley Creek. The tributary has an average width of 1.2 m and average depth of 0.12 m. The mean velocity is 1.2 m/second. It is fed from ground water which keeps the flow constant. The stream bed is gravel and the soil in the area is primarily glacial till with clay subseams.

The tributary on which the dam is situated is fed by two sources which converge approximately 1.5 km east of the Gilday residence. The tributary then drops 450 m from its source to the Gilday residence over a straight line distance of 5.6 km at a 12:1 gradient. Thereafter it exhibits a 55:1 gradient to its confluence with Cowley Creek, immediately to the west of km 8.0 on the Carcross Road.

The surrounding area is hilly terrain, with the creek travelling through open black spruce and thick willow, and closed white spruce forest. It is a fairly typical piece of Yukon bush.

The project site is located approximately 30 km south of Whitehorse, Yukon, at km 11.5 on the Carcross Road. The dam location is 1.6 km from the Carcross Road.

6. TECHNICAL DETAILS

The technical details described below are the final details from which the project was built. The first proposal was submitted in the spring of 1981, but it wasn't until 21 months later that the commercial land use lease was granted and construction began. During this long delay there was plenty of time to reconsider design features and improve the efficiency. It was decided to accommodate the demands of a small wood-working shop, as well as household needs, into the project.

The power requirements are calculated as follows. A normal single family load in southern Canada is 720 kWh per month. It is expected to average 720 kWh per month in the Yukon, although it may be more in the winter and less in the summer. With using 720 kWh per month, and there being 720 hours in a month, the requirements are 1kW, or 1,000 watts at any given time.

The net power potential of the stream was calculated to be 1.6 kW by using the following formula:

$$\frac{30 \times 75.6 \times .5}{709} = 1.6$$

where 30 = 30 feet of head

75.6 = 75.6 cubic feet per minute firm flow (cfm)

.5 = 50% efficiency

709 is a constant

The firm flow of the creek is 1.26 cubic feet per second (cfs), based on observations over a five year period. With this rate of firm flow and a head of 9.0 m, the estimated power is 1.6 kW. This is assuming 50% efficiency based on losses derived from the following: flume 5%, turbine 5 to 15%, generator 5 to 10%, belts 10 to 20%, invertor less than 10%, and batteries 20 to 30%.

The penstock length is 180.0 m. The penstock is 6" diameter Class 63 solvent bond PVC pipe. Head loss in the pipe, determined on a nomograph, is 5%, or 9.0 m in 180.0 m. The electrical transmission length from the powerhouse to the residence is 82.5 m, at 90% efficiency.

The equipment used in harnessing the energy is a follows. The turbine is a Solace 6" crossflow turbine with stainless steel runner and manually operated control volves. This low head turbine was seen to be the only possible one for this project and was chosen for its unique ability to operate efficiently on heads as low as four metres. Other turbines at this scale require at least 12 m of head.

The generator, which transforms the mechanical power of the turbine into electricity is a 36 v DC brushless, self-excited heavy duty generator. The excess power is stored in three 12 v, 220 amp hour lead acid, deep cycle industrial batteries.

As the household appliances and workshop electrical equipment are AC units, it is necessary to have an inverter. The power is converted on demand to AC by a Best M36-3800 watt solid state inverter, with a 15 kW surge capacity.

7. CONSTRUCTION DETAILS

7.1 Initial site preparation

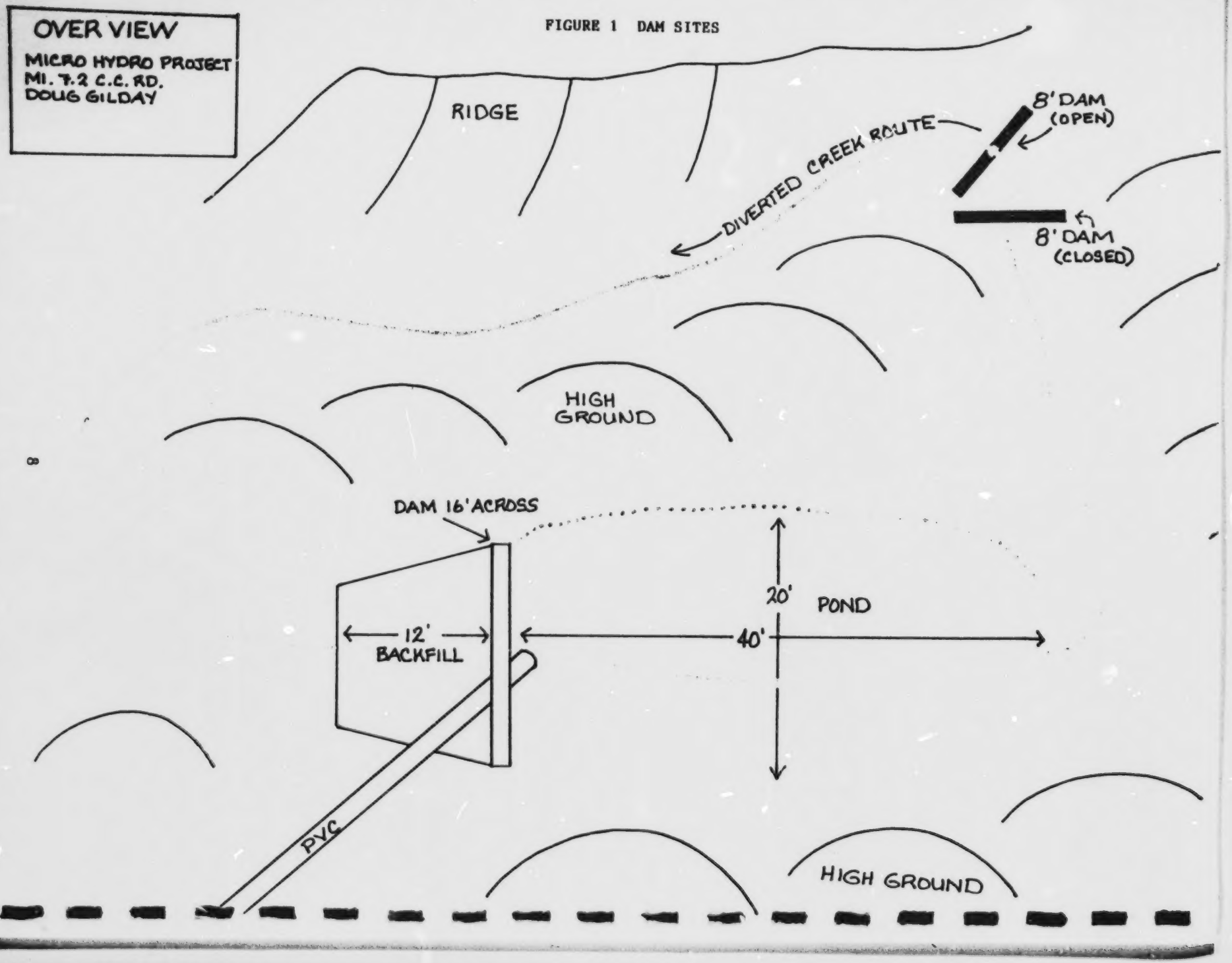
The area involved was cleared of the willow bush which was stacked and burned. The organic surface was left as intact as possible for future re-vegetation. Once the necessary bush was removed from the power house and dam site and the 180.0 m penstock length, it was possible to get a better idea of the subtlety of the land. Minor adjustments were made to make best use of what was available. Using a transit and level, a survey was made of the lines and elevations of the project, and the overviews, in terms of head and distance, were confirmed.

7.2 Dams and Diversion

The lay of the land turned out to be next to ideal. Using an old gully, the creek was easily diverted to allow dam construction on a dry site. This diversion was made a permanent feature of the site by the installation of two small secondary dams. Figure 1 illustrates the site. The two small dams will enable the main dam and pond to be drained at any time. The two small dams are 2.4 m across and 1.2 m high, while the main dam is 4.8 m across and 3.0 m high.

The three dams were constructed in the following manner. A backhoe prepared a trench that extended 0.6 m below the creek bottom and 1.2 m into the bank on either side of the gully. Full length,

FIGURE 1 DAM SITES



damp-proofed 6" x 6" timbers were stacked in the trenches and spiked. Heavy tar was laid between the rows. Once the timbers reached the established height, the trench was backfilled and the timbers were secured. On the main dam two 2.5 m sewer pipe of concrete construction were laid as overflows. The 8" flume was passed through the centre of the wall for water collection, and an emergency drain was placed at the bottom. The dam was then backfilled 3.6 m on the downstream side to withstand the weight of the water in the pond.

The two smaller dams were built so that, by adding or subtracting planks, the water could be diverted to either channel to allow for filling or emptying of the pond.

The development has flexibility and it was relatively easy and inexpensive to build. Water use for domestic purposes is seen as a valuable spin-off of the project, although it may rob 1 or 2 per cent from the electrical generation some of the time.

Ice is a concern in the dam and intake, and it may be necessary to shut down the plant for a day or two during the candle-ice stage in the fall.

The proponent felt the dam could be improved greatly with a larger budget, with the use of imported rip rap and sheet piling. He believes that his development will work well, with seepage being the main concern.

7.3 Flume

A flume trench 0.6 m deep was dug by the backhoe from the dam 180 m to the site of the power house. The bottom of the trench was smoothed by hand so that the PVC flume pipe would not be riding on large abrasive rocks. The proponent suggests that in future projects sawdust would be a good medium in which to bed the plastic flume or that a utilidor be surface-constructed and filled with sawdust to achieve a more accessible line with less abrasion. The lay-out of the penstock is shown in figure 2.

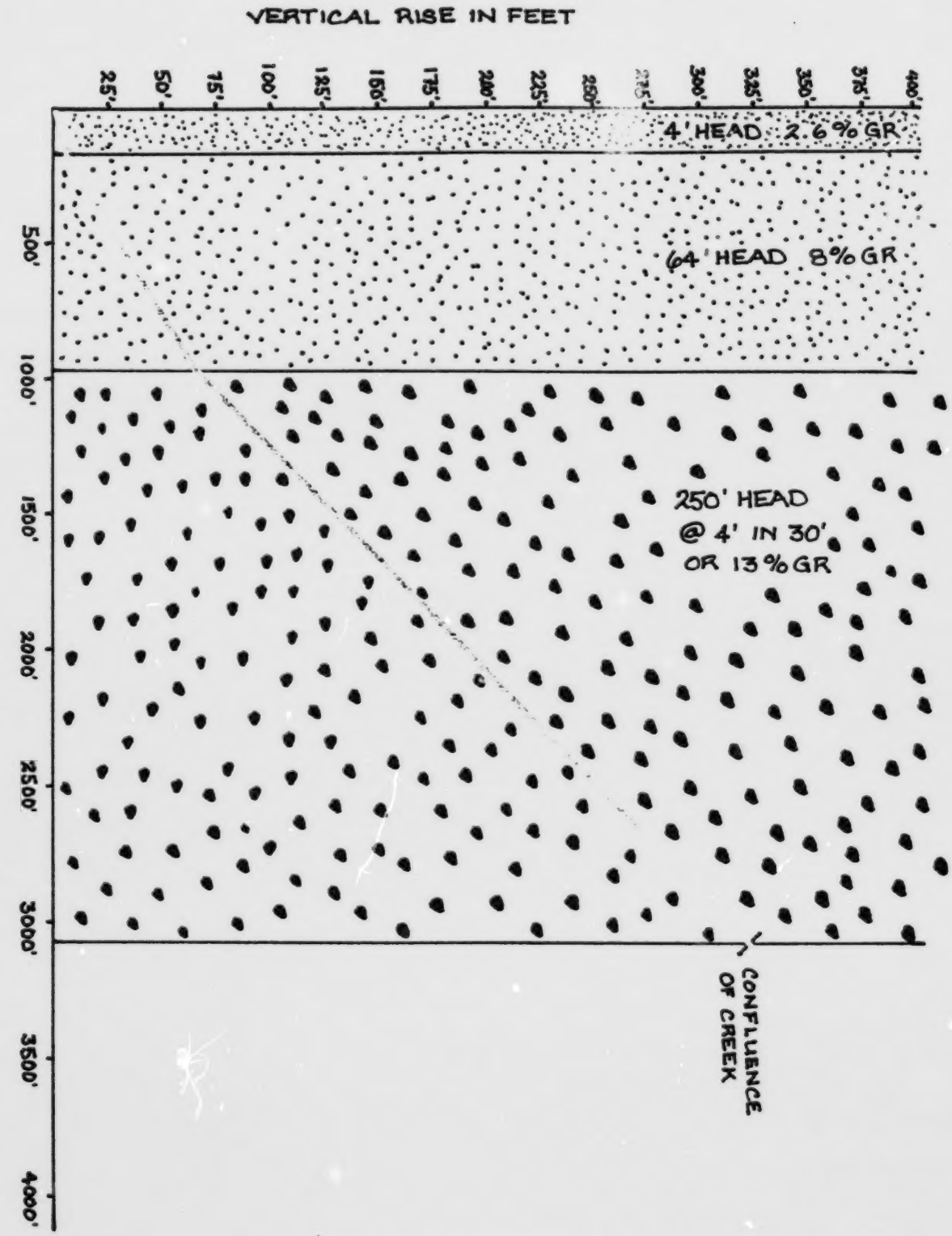
The pipe was fitted into the dam, and extended 0.6 m into the pond with a screen and trash rack. An anti-siphon tube was attached to prevent line collapse during blockage. Each 0.6 m section of pipe was glued and assembled all the way to the powerhouse.

7.4 Powerhouse

The power house is set on a concrete strip footing and measures 3 m x 3.2 m. The spillway, which takes water exiting from the turbine, is made of poured concrete and is under the floor of the powerhouse.

The construction of the power house itself is double wall 2" x 4"'s for the downstairs and 2" x 6" for the upper storey for an average insulation value of RSI 4.9. The plan is to use waste heat in an efficient building and to utilize the upstairs for some mechanical purpose, such as laundry, that may be done with 32 v straight from

FIGURE 2 PENSTOCK LENGTH



the generator. As estimates on the amount of waste heat vary, the proponent will wait and see what there is and what can be done. The turbine, generator, batteries, inverter and electrical panel are all located in the powerhouse.

7.5 Transmission

Both power and water are transmitted to the house and shop. 110 v power is transmitted on #2 - 3 strand wire, hung overhead with two poles. Transmission length is 82.5 m with 98% efficiency. A 2" polyplast line buried 0.6 m below grade in an insulated box is used to transport the water.

8. REGULATORY PROCEDURES

8.1 Water Use Licence

The Yukon Territory Water Board is responsible for reviewing and granting all water use licences in Yukon. The application for a licence for a micro-hydro system was the first of its type to appear before the Board, and, therefore, demanded special consideration which took an inordinate amount of time.

The application was submitted, complete with an environmental impact assessment, in May 1981. In August 1981 a hydro sub-committee of the Water Board requested more information, and in September 1981 the application went through the standard procedure of being advertised publicly in the Canada Gazette. A public hearing was scheduled for February 1982, but due to amendments to the proposal by the applicant, and the necessity for them to be publicly advertised, the hearing was rescheduled for March 1982. As there were no intervenors the hearing was cancelled and the application was forwarded to Ottawa in May 1982 for a signature. The licence was finally issued in June 1982, exactly 13 months after submission. A five year commercial land lease was subsequently granted in February 1983, eight months later; its approval was contingent on the granting of the water use licence.

The fundamental reason for the delay was that no authority existed to grant water rights for small-scale, private hydro developments.

The lack of any guidelines demanded that the micro-hydro application be treated to the same procedure as any other application and that the final approval be granted by the Minister of Indian Affairs and Northern Development (DIAND) before a licence could be granted.

This procedure is too involved and drawn out, and only serves as a detriment to further similar projects. The need for an appropriate set of guidelines and procedures for small scale hydro systems has been demonstrated by this project.

Despite the fact that the applicant was extremely frustrated with the delays, he felt that without the project's federal/territorial backing he would still be waiting for the water use licence and land lease, or would have given up completely by now. Appendix A describes the streamlined regulatory process which the Water Board has drawn up, in conjunction with the Department of Economic Development of the Government of Yukon.

8.2 Other Permits and Licences

A commercial land use lease was needed from the Federal Lands and Commission (FLAC) office, and its approval pended on the granting of the water use licence. The application was made October 1981, and the lease was granted February 1983, eight months after the water use licence.

The Department of Fisheries and Oceans had to pronounce the site suitable and a Federal Resource Management officer visited the site. If the waterway is considered navigable, then an application has to go through the appropriate channels.

Other permits needed include a building permit for a powerhouse greater than 9.3 m^2, an electrical permit for wiring etc., a plumbing permit for any piping, and a permit for slashing and burning bush.

9. BUDGET REVIEW

Estimated November 1983	
Turbine, Generator, REgulator, Control Panel	$ 5,500.00
20 cm PVC Plastic Pipe	1,850.00
20 cm Butterfly Valve	570.00
Batteries	1,200.00
Wire	400.00
3 kW Inverter	4,500.00
Powerhouse 3m x 4m	800.00
Excavating Equipment	1,000.00
Overflow, trash rack	500.00
Pipe Insulation	730.00
Shipping, Miscellaneous Hardware	650.00
	$17,700.00

To date	
Turbine	$5,500.00
Invertor	4,200.00
Generator and Regulator	1,397.00
Electrical Panel	300.00
Flanges, Saddles, Vacuum Relief, Butterfly valve, bolt	841.43
Batteries	741.00
Flow gatering valve	1,000.00
PVC Pipe	1,415.40
Freight	324.80
	$15,719.63

The original estimate in March 1981 was $12,000, but it increased by $5,700 to $17,700 during the delay in acquiring the water use licence and land use lease.

There is some work left to be done, estimated to cost an additional $2,000.

10. ECONOMIC IMPLICATIONS

The cost effectiveness of the micro-hydro project is best evaluated by comparing it with the existing alternatives, which are connection to the existing grid systems of Yukon Electrical Co. Ltd., or continuing to use a gasoline generator.

Connection to the grid system requiring greater than 1.6 km of poles and overhead line was possible in 1984 for a price of $15,000. Thereafter, electricity is available at an initial cost of $.07/kWh. Assuming the $15,000 connection is not subject to interest on a debt, the cost for grid connection in the first year of a 25 year period, based on 14,016 kWh per year consumption, would be $1,581.12. This works out to $.11 kWh. In the last year of the 25 year period, with the same consumption and an annual inflation rate averaging eight per cent, the cost of electricity would be $6,809.09, or $.49/kWh.

With the micro-hydro system costing $18,000, assuming no interest payments, maintenance costs of $200 per year and consumption of 14,016 kWh per year, the cost in the first year of a 25 year period is $.07 kWh. In the last year of the 25 year period, with the same consumption and an annual inflation rate of eight per cent for maintenance costs, the cost would be $1,988.27, or $.14 kWh. Table 1 below illustrates the comparison.

TABLE 1

COMPARISON OF COST OF ELECTRICITY

	1st year	25th year
Microhydro	$.066	$.142
Grid System	.113	.486

The proponent is using a gasoline generator at the present time, until the micro-hydro system is operational. He estimates it runs for approximately 10 hours per week, and is used to charge the batteries to run the radio, television, telephone and the occasional light. Propane is used as the main source of light. As the generator does not run full time, and therefore is not a constant source of power, it is unfair to compare it to the other sources which deliver more power on a steady basis. Although the cost of electricity produced by the generator may be cheaper, it must be remembered that there are difinite limitations with the system. The micro-hydro or grid systems permit a much greater degree of flexibility and convenience.

Over the 25 year period the average cost of electricity from the micro-hydro system is $.093 kWh. The total outlay is $32,621.43 over 25 years. This is comprised of $18,000 development costs, and $14,621.43 maintenance costs, starting at $200 per year with eight per cent per annum inflation. It is assumed there are no interest payments.

Over the 25 year period the average cost of electricity from the grid system is $.205 kWh. The total outlay is projected to be $86,846.02,

which is comprised of $15,000 grid connection costs, and $71,846.02 for 14,016 kWh each year for 25 years assuming eight percent annual inflation and no interest payments. The savings over 25 years by using the micro-hydro system instead of the grid connection is $54,224.59 or 62% of the cost of grid connection after 25 years.

The simple payback period is 15.5 years, where the cost of installing the micro-hydro system ($18,000) is equal to the amount spent on connection to the grid system plus the cost of the electricity consumed at $.206 kWh. This is again assuming no interest payments and an eight percent per annum inflation rate.

Table 2 compares the cost of electricity over 25 years for the two systems. The total cost of electricity from the grid system is 3.4 times the total cost of electricity from the micro-hydro system after 25 years.

TABLE 2 COST OF ELECTRICITY

	GRID CONNECTION			MICRO-HYDRO SYSTEM	
Year	$/kWh @ 8% Inflation	Cost for 14,016 kWh	Total Cost 1	Maintenance Costs @8% inf.	Total Cost 2
1	.070	981.12	1,581.12	200.00	920.00
5	.096	1,354.54	1,954.54	272.10	992.10
10	.141	1,976.26	2,576.26	399.81	1,119.81
15	.206	2,887.30	3,487.30	587.44	1,307.44
20	.302	4,232.83	4,832.83	863.16	1,583.16
25	.443	6,209.09	6,809.09	1,268.27	1,988.27

1. Total Cost - includes the cost of electricity plus 1/25 of cost of grid connection, or $600 per year.
2. Total Cost - includes maintenance costs plus 1/25 of project cost, or $720 per year.

Although it is impossible to make accurate predictions on the cost per kWh for even a few years ahead, the potential for savings is obvious.

11. ENVIRONMENTAL IMPACT

At the request of the Water Board an assessment was made of the proposed micro-hydro system's impact on the environment. It was determined that the project would not be detrimental to the environment or to other water users. The full document is in Appendix B.

The stream travels through open black spruce and willow and closed white spruce forest. Some beaver dams, which periodically alter the stream channel, exist down stream from the hydro site. Fish have never been seen by local residents above the Carcross Road culvert, which is 1.6 km downstream from the hydro site. Five species of fish, Chinook Salmon, Arctic Grayling, Longnose Sucker, Lake Chubb, and Slimy Sculpin have been found in the lower reaches of Cowley Creek. However, the author of the environmental report feels it is highly unlikely that any of these species would inhabit the tributary on which the micro-hydro project is located due to barriers such as beaver pond complexes, the culvert where Cowley Creek cross the highway, and general debris.

The environmental report only covered the fish population as this aspect was considered most important. It did not research any other possible impacts, such as the possible effects of erosion. This would have to be done when the project is operational, but it is expected the damage from the altered creek course will be negligible.

Low-head hydro systems in general are not considered to be as large a risk to the environment as high-head systems. Low-head systems do not flood large areas or cause significant changes in creek flow.

TABLE 3

ELECTRICAL SERVICE TARIFFS

RESIDENTIAL RATES ¢/kWh

kWh	Whitehorse	Watson Lake	Haines Junction	Pelly/Stewart Crossing	Dawson City	
0 - 200	7.2	18.1	15.1	26.2	0-300	15.5
201 - 500	6.7	16.4	14.0	23.7	300+	20.7
501 - +	6.3	14.6	10.7	18.3		

COMMERCIAL RATES

0 - 200	8.6	22.3	16.0	26.0	24.8
201 - 400	7.5	17.9	13.8	23.0	24.8
401 - +	6.3	14.7	10.6	18.3	24.8
kW demand	$1.10	2.25	1.65	1.95	4.45

For commercial users total energy charges are based on kW demand at an instantaneous moment. The bill is determined by the peak kW demand registered on the meter multiplied by the number of kWh used in a month. In fact very few commercial users go beyond the rate for 201 - 400 kWh.

12. POTENTIAL FOR REPLICATION

Yukon has an abundance of small rivers and streams capable of generating a minimum 4.5 m. head. With the increasingly exorbitant price of electricity, especially for rural residents, such as the proponent, and for communities outside of Whitehorse, it appears the development of micro hydro projects is becoming a viable option. This is especially true if the full potential of a stream is harnessed and the hydro system can service more than one household. Table 3 gives the electrical rates (1984) for various Yukon communities.

The technology of micro-hydro systems is relatively simple and the equipment easy to obtain. Water power can be economical in situations where the head is relatively high or where a dam with a relatively small pen stock can be built on a small river. Most turbine manufacturers will give a considerable amount of advice when given pertinent information, such as water flow, head, penstock length, water and weather conditions, pond measurements, transmission length, estimated power to be used and a topographical map with the site sketched in.

Once the guidelines to facilitate the granting of water use licences for micro-hydro projects have been drawn up by the Water Board and YTG, and if this projects proves to be a successful demonstration, there could be an increased interest in similar projects. The potential is there in terms of waterways.

13. MONITORING

There is no monitoring data available at the time of writing this report, but information on the system performance will be available in the spring of 1986, after the system has been operating for a year. Monitoring will be undertaken by the Energy and Mines Branch of the Government of Yukon, with assistance from the proponent.

It is expected that a kilowatt hour meter will be used to record the number of kWh used per month. An amprobe instrument will be used to measure the amps and volts, and to generally checkout the overall performance of the equipment at normal load and overload situations. The performance of the storage batteries will also be monitored.

14. CONCLUSIONS

There are no real conclusions to be reached on the micro-hydro project at the time of writing this report as the system is not yet operational. There is still some work projected for the spring of 1985, which includes finishing the powerhouse and installing equipment, running the powerline to the house, and diverting the creek for start-up.

This pilot project in micro-hydro applications will serve as a good indicator of the viability of this form of alternate energy in the Yukon. The calculations comparing the micro-hydro and grid systems indicate that the micro-hydro system is a viable source of inflation-proof power. This is especially true considering the project is less than optional. Higher heads and larger flows resulting in AC generation in excess of 10 kW yield much better returns than this project.

15. ACKNOWLEDGMENTS

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APPENDICES

APPENDIX A

MICRO HYDRO GENERATION IN YUKON

A Guide to the Regulatory Process

Prepared for

Energy and Mines Branch, Government of Yukon

March 1985

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INTRODUCTION

Micro-Hydro Power Potential

In many remote locations in Yukon, off the power grid, energy must be supplied by generators fuelled with hydrocarbons. As prices of oil products rise, there will be a growing interest in developing micro-hydro systems - the generation of power from small rivers, streams and waterfalls.

Yukon contains numerous potential micro-hydro sites capable of generating hydro output in the range of (2-100 Kw). Most of these sites have not been examined by hydro companies; feasibility and planning studies are necessary to determine the power potential of these watercourses. The project designer should gather as much background information as possible at the site before proceeding with the other component of the project - the regulatory process.

Regulatory Process Overview

A number of regulatory agencies in Yukon are involved with the licensing requirements for a micro-hydro project. There are two distinct levels of bureaucracy to deal with: the level involving a formal review process for a project application, and a secondary level of agencies requiring only notifications of intent to develop a project.

The two principal regulatory agencies involved are:

i) YUKON TERRITORIAL WATER BOARD (YTWB)
The YTWB administers the Northern Inland Waters Act (NIWA) and Regulations and must be approached by the applicant for a water use licence.

ii) DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT (DIAND)
DIAND administers the Territorial Lands Act and Land Use Regulations and must be approached by the applicant for both a land lease and a land use permit for construction.

With good background preparation, a project applicant can proceed with the formal review processes with some degree of overlap, to avoid delays. It must be remembered that no two

micro-hydro developments are exactly alike - each will have its own unique set of environmental considerations and constraints. Bearing this in mind, the time factors presented in this guide are general in nature and serve only as the most accurate estimate of the process.

GUIDE OUTLINE

The following is a step-by-step guide to the regulatory processes involved in licensing of a micro-hydro site in Yukon. Procedures are subject to change as new guidelines are developed by the regulatory agencies. A complementary guidebook is being prepared which will outline the more technical and economic components of a micro-hydro project.

The steps of the process will be dealt with in the following order:

- Preparation of background information
- Water use licensing application process
- Land tenure application processes
- Land use permit application process
- Other government agencies/licensing

Flow charts will accompany the descriptions of the more complicated regulatory processes, to aid in explanation.

PREPARATION OF BACKGROUND INFORMATION

Much of the delay in the regulatory process comes as a result of an incomplete application for each licence or permit. As a general rule, the more attention paid to collection of background information and preparation of data to accompany an application, the fewer delays in the regulatory process. Conflicts which arise in the feasibility and planning stages could put an end to the project; it is preferable to sort out these conflicts as early as possible.

A: Feasibility Studies (Off-Site)

The first step in determining the feasibility of a project on a particular piece of land is a

search for potential property ownership conflicts. Below is a list of the potential conflict areas, with reference to the government agencies where these questions can be answered; full addresses can be found in the Appendix.

i) LAND TITLE SEARCH

Private ownership and title can be verified with the Registrar of Land Titles, Government of Yukon.

ii) MINERAL CLAIM SEARCH

Active mining claim records can be verified with the Mining Recorder's Office, DIAND.

iii) NATIVE LAND CLAIMS AREA SEARCH

Registered land claims boundaries can be verified with the Supervisor of Lands, DIAND. Conflicts with any of the above land designations would prevent the power project from proceeding.

iv) REGISTERED TRAPLINE SEARCH

The applicant may wish to identify the registered holder of the trapline in the area of the project, and notify that person of the project plans. Lists of registered traplines can be verified with the Yukon's Department of Renewable Resources.

B: Feasibility Studies (On-Site)

If no potential land title conflicts have been encountered, the applicant can proceed with on-site studies and data collection in preparation for submission of project plans to the regulatory agencies. The applications for the formal review processes should contain as much detailed information about the project as possible, in order to avoid any delays. Below is a checklist of information that can be prepared to accompany applications for both water use and land use licences, organized in a progressive manner from site reconnaissance to conceptual planning stages:

i) SITE RECONNAISSANCE

a) Rough visual assessment of site power potential

b) Sketch of physical layout of site, including access routes

ii) SITE DATA COLLECTION

a) General - existing structures inventory
- contour mapping review
- aerial photo review

b) Climate
- estimate of ice-free period
- temperature records review
- precipitation records review
- air quality survey

c) Hydrology
- recording of streamflow discharge
- estimate of water storage needs
- reconnaissance of reservoir site
- record of maximum/minimum water levels
- measure of stream gradient
- measure of water temperature
- description of stream banks
- presence of debris in stream
- water quality tests

d) Geology
- geologic mapping review
- bedrock testing/drilling
- soil survey of reservoir site
- soil survey of streambed
- seismic records review

e) Vegetation
- description of forest cover
- description of shrubs/herbs

f) Fish/wildlife
- fish species inventory
- wildlife species inventory
- stream benthic invertebrate inventory
- description of habitat use

g) Construction
- aggregates inventory
- wood materials inventory

h) Land use
- survey of existing and historical land use (e.g. recreation, hunting, trapping, fishing, mining, transportation)

j) Historical/ archaeological
- inventory of sites

iii) PROJECT PLANNING STAGES

a) Maps of site location
- small scale map of site in relation to closest population centre
- large scale map of site details and access

b) Site layout plans, descriptions and scale drawings
- dam design and intake (length, width, height, foundation)
- power canal/millrace (length, width, depth, soil conditions)
- penstock (length, size, soil conditions, above ground or buried position)
- powerhouse (size, design, foundation, location, access)
- transmission line right-of-way (width, length, soil conditions, location, access)
- tailrace (length, width, depth, soil conditions)
- reservoir (length, width, depth, soil conditions, spillway design)

c) Description of power generating equipment
- turbine design
- generator and governor design
- power output
- cost estimates of purchase price

d) Construction schedule

- equipment to be used (type, size)
- names of contractors/subcontractors
- fuel/chemical use, handling and storage
- source of construction materials
- cost estimates for work
- environmental considerations
- construction time schedule

e) Operating schedule

- reservoir drawdown schedule
- reservoir filling schedule
- minimum flow for fisheries requirements
- contingency plan for emergencies

Thorough on-site studies and drafting of plans and drawings can be expected to take from (3-6) months, depending upon the scale of the micro-hydro site. A considerable amount of time and expense will be incurred during this phase in order to determine the feasibility of generating power at a site.

WATER USE LICENCE APPLICATION PROCESS

A water use licence is required for any person, company or agency intending to use inland waters in Yukon. Licences are issued by the Yukon Territorial Water Board (YTWB) upon approval by the Minister of DIAND and under the authority of the Northern Inland Waters Act and Regulations. A copy of the NIWA Regulations can be found in the Appendix, with applicable sections highlighted.

Section (5) of the Regulations defines the "Classification of Uses of Water", including power purposes. An amendment, 5(e), notes the following:

> "... a use for Class O power purposes being the use for water for the authorized production of not more than 150 Kw."

This amendment defines the small hydro scale. There are no water use fees assessed for Class O power generation under the Regulations.

Regulatory Process Overview

A formal review process is conducted for every application for a water use licence. This

process involves the filing of an application (Schedule II), accompanied by the information gathered in the feasibility and planning stages of the project. A copy of Schedule II can be found in the Appendix.

At the present time, the YTWB does not have a set of guidelines which outline the information requirements for the applicant. The best approach for the applicant is to provide as much information as possible, thereby avoiding possible delays.

Assuming that all information is provided on the first application, the full review process can take a minimum of (4) months. If further information is needed, or other delays are encountered, the process could take approximately (7) months.

The following is a step-by-step summary of the water use licensing process. Included with each step is an approximate time factor for completion of that step; bracketed times indicate delays which could be avoided with adequate provision of information. A flow chart accompanies this description (Figure 1), numbered accordingly.

Process Guide		**Time Factor (Days)**
i)	Notice of intent to develop project:	1
	As a formality, the applicant may wish to send the YTWB a letter acknowledging the intent to apply for a licence. This letter would alert the YTWB about the upcoming application. This letter can be sent at any time during planning studies.	
ii)	(a) Application submitted to YTWB:	30
	The staff of the YTWB will review the application and information provided. The time factor involved will depend upon the complexity of the project.	
	(b) YTWB request for more information:	(30)
	Further information may be required to satisfy the YTWB staff. Delays will result depending upon the response time of the applicant.	
iii)	Public notice of licence application:	35
	The YTWB will publish a public notice in the Canada Gazette and local papers, asking for comments on the proposed water licence application. This notice must appear (35) days before the scheduling of a public hearing.	
iv)	Technical review of application:	
	Subcommittees of the YTWB will review the licence application and information during the gazetted period.	

Process Guide (cont'd)		Time Factor (Days)
v)	(a) Public hearing: A public hearing is held in front of the YTWB where the applicant and interested parties will discuss the licence application. The YTWB will provide rules of procedure for these public hearings to any interested persons. Transcripts from the hearing take (1) week to produce.	(7)
	(b) Cancellation of public hearing: Interested parties must file with the YTWB an intention to comment on the licence application at least (10) days prior to the hearing date; if no persons intend to intervene, the hearing is cancelled.	
vi)	(a) Technical review of the application: A full YTWB review of the application will take place, plus a review of new information presented at the public hearing.	21
	(b) YTWB request for more information The YTWB may wish the applicant to provide more information after the hearing and technical review. Delays will result depending upon the response time of the applicant.	(21)
vii)	Drafting of water licence: If all information is complete and the YTWB wishes to recommend that a licence be approved, a water use licence is drafted with appropriate conditions. In rare cases, the YTWB may reject an application at this point.	14
viii)	Ministerial review of licence: The Minister of DIAND must review each water use licence and make a decision on it. Usually this step is a formality.	14
ix)	(a) Ministerial approval: The Minister of DIAND may approve the licence and conditions recommended by the YTWB.	
	(b) Ministerial rejection: The Minister of DIAND may reject the licence and return it to the YTWB. In this case, further information may be required of the applicant, and further review of the licence is necessary.	(30)
x)	Issuance of water use licence: If the Minister of DIAND approves the water licence and conditions, the YTWB will issue a licence to the applicant.	1
TOTAL TIME FACTOR ..... DAYS		116 (202)
	MONTHS	4 (6½)

A security depsoit may be required of the applicant before a licence is issued. DIAND field staff will inspect the project during construction and operation to ensure that licence conditions are met.

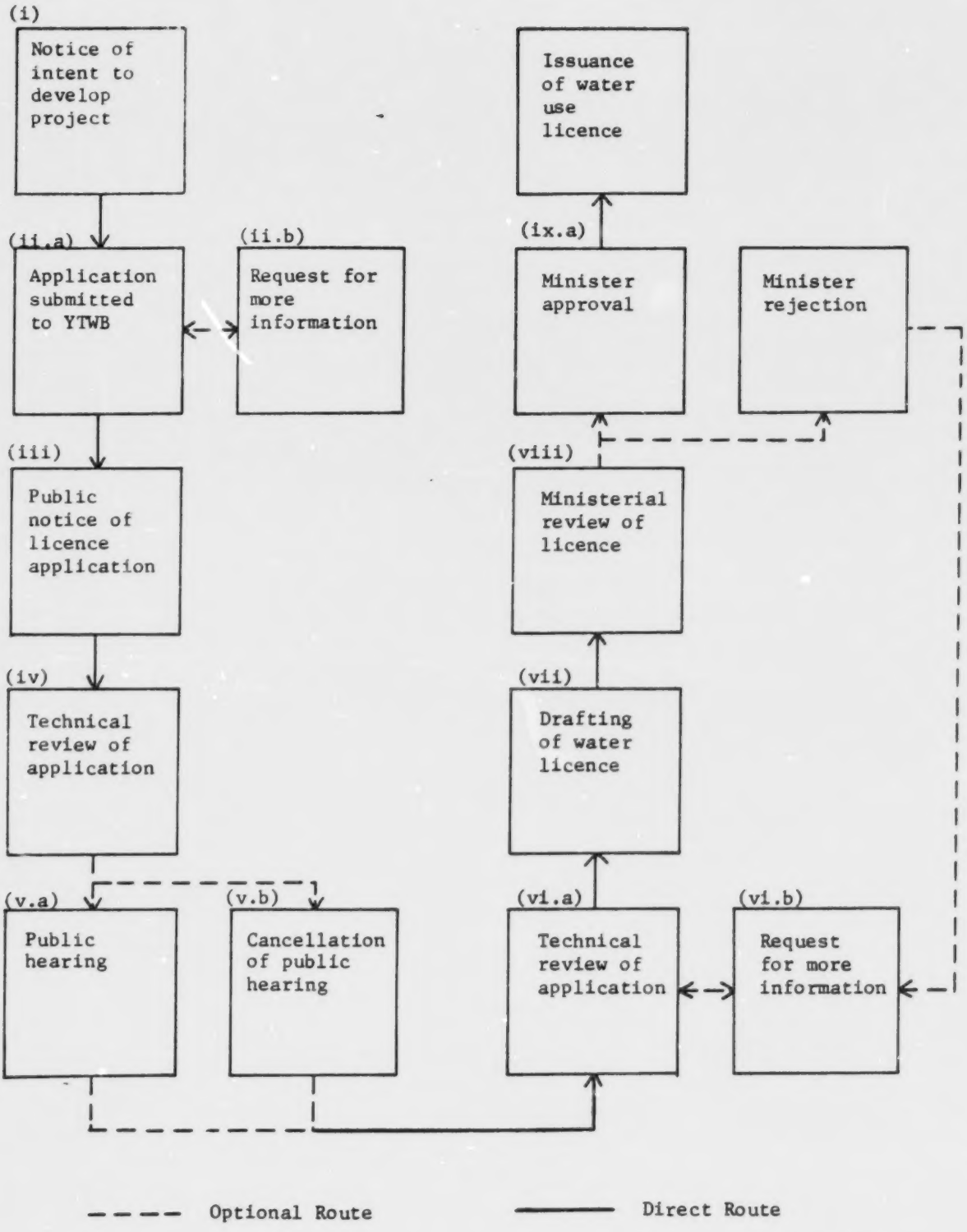

Figure 1: Water Use Licence Application Process

LAND TENURE APPLICATION PROCESS

In Yukon, almost all the land outside established communities is held by the Federal Government as Crown Land. The exceptions to this are private titles, Territorial Commissioner's lands and Native land claims areas. Crown lands and Commissioner's lands are usually leased to interested parties for a specific period of time. The former lands are administered by DIAND and the latter by the Yukon Territorial Government. Leasing processes are outlined below for both these land designations.

A: Leasing of Crown Land

If the power site is to be located on Crown land, the applicant must apply through a formal review process for a lease for surface rights. This process involves the filing of an application, accompanied by the appropriate information, to the nearest DIAND field office. Application forms and guidelines for their completion can be obtained at DIAND field offices.

Assuming that all the information is provided in the first application, the full review process can take a minimum of (3) months. If delays are encountered, the process could take approximately (5) months.

The Advisory Committee involved in this review process meets the first week of every month; applications must be submitted to the Supervisor of Lands, DIAND, at least (2) weeks prior to the Committee meeting to be considered immediately. A special note should be made — Federal civil servants need an Order-in-Council from Ottawa before approval of a land lease. An extra delay of up to (1) year can result before lease approval for a Federal civil servant.

The following is a step-by-step summary of the land leasing application process for Crown lands. Included with each step is an approximate time factor for completion of that step; brackets indicate delays which could be avoided with good provision of information. A flow chart accompanies this description (Figure 2), numbered accordingly.

Process Guide		Time Factor (Days)
i)	Application submitted to DIAND field office: At the DIAND field office, the Resource Management Officer will review the application. Depending upon access to the	30

Process Guide (cont'd)		Time Factor (Days)
	site and Officer's scheduling, a field inspection will be made of the proposed lease site. The application is forwarded to the Supervisor of Lands for processing and review.	
ii)	(a) Review and approval of application:	7
	Often, the Supervisor of Lands will proceed only when the water use licence has been approved. Then, given that the lease site has no conflicting land title and conforms to government policy for land use, the application is forwarded to the Federal-Territorial Lands Advisory Committee (FLAC) for review.	
	(b) Review and rejection of application:	(21)
	The application could be rejected outright, or returned to the applicant for further information. Delays will result depending upon the response time of the applicant.	
iii)	Review of application by FLAC:	30
	Committee members of the Federal and Territorial Governments review the application and forward comments to the Director of Renewable Resources, DIAND. The application will also be discussed at a full committee meeting.	
iv)	Review of application by Director:	7
	The Director of Renewable Resources will review the FLAC recommendations and discussions from the Committee meeting and decide upon the application.	
v)	(a) Director approval:	1
	The Director may approve the land lease completely, providing terms of the lease for the applicant.	
	(b) Director approval with modifications:	(3)
	The Director may approve the land lease subject to modifications by the applicant.	
	(c) Director reservation of decision:	(14)
	The Director may reserve a decision until the applicant has provided further information.	
	(d) Director rejection:	
	The Director may reject the application due to land use conflicts or other concerns.	
vi)	Lease drawn up and registered:	7
	DIAND will design the lease and conditions for the applicant and register the lease with the Registrar of Lands. Terms of lease renewal and fee schedule will be set.	
TOTAL TIME FACTOR	DAYS	82 (120)
	MONTHS	3 (4)

Once an applicant has secured the surface rights to the site, he/she can proceed with the construction after obtaining a valid land use permit from DIAND.

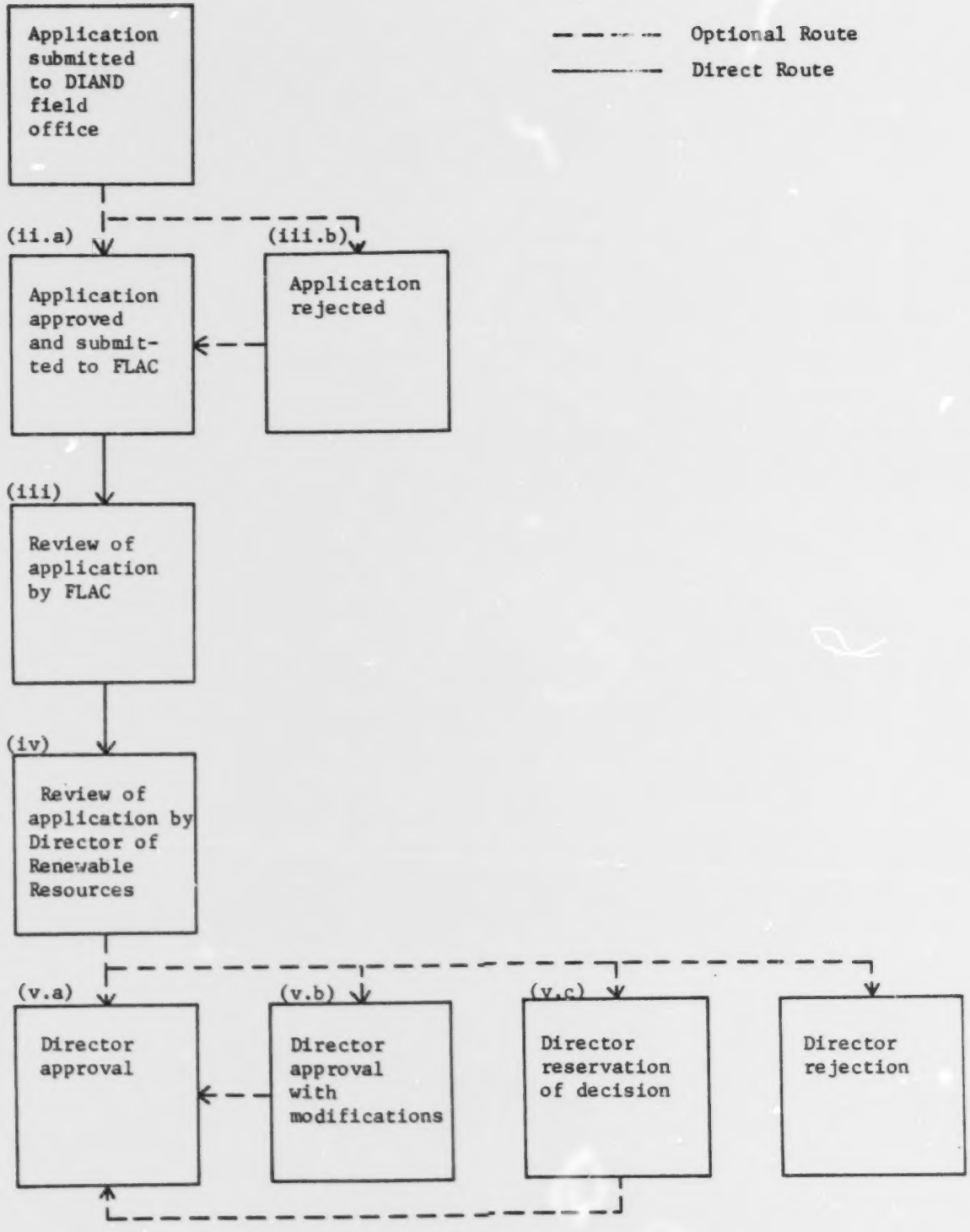

Figure 2: Land Leasing Process for Crown Land

B: Leasing of Commissioner's Lands

As more land is transferred to the Territorial Government, the leasing of Commissioner's Lands will become a regular occurrence. If the power site is on these lands, the applicant must apply through a formal review process for a lease for surface rights. This process involves the filing of an application, accompanied by information, to the YTG lands office. Application forms can be obtained from that office. Assuming that all information is provided with the first application, the full review process will take a minimum of (3) months. If delays are encountered, the process could take approximately (4) months. The Advisory Committee involved in this process meets the first week of every month; applicants are advised to submit applications according to this schedule. No restrictions on leasing apply for Territorial civil servants.

The following is a step-by-step summary of the land leasing application process for Commissioner's Lands. Included with each step is an approximate time factor for completion of that step; brackets indicate delays which could be avoided with good provision of information. A flow chart accompanies the description (Figure 3), numbered accordingly.

Process Guide		Time Factor (Days)
i)	Application submitted to YTG lands office:	30
	The Lands Inspector will review the application and conduct a field inspection of the site. Delays will result depending upon scheduling of inspections and access to the site. The application is forwarded to the Lands Application Review Committee (LARC).	
ii)	Review of application by LARC:	30
	The Committee members review the application and forward comments to the Director of Lands and Housing, YTG. The application will also be discussed at a full Committee meeting.	
iii)	Review of application by Director:	7
	The Director of Lands and Housing will review the recommendations of LARC and the discussions from the meeting, and decide upon the application.	
iv)	(a) Director approval:	1
	The Director may approve the lease and attach conditions for lease arrangements and renewal.	
	(b) Director rejection:	(14)
	The Director may reject the lease outright, or return the application for further information from the applicant.	

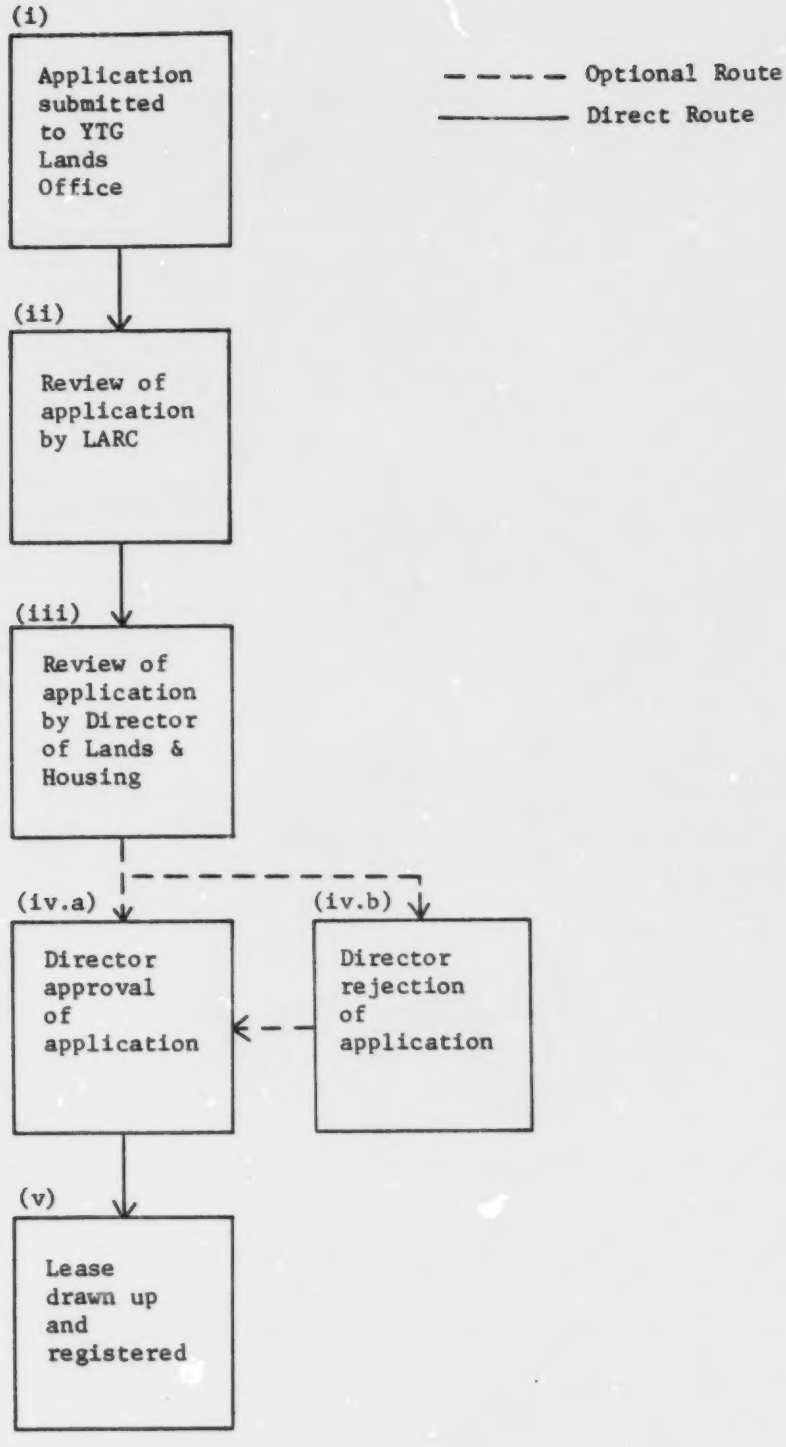

Figure 3: Land Leasing Process for Commissioner's Lands

Process Guide (cont'd)		Time Factor (Days)
v)	Lease drawn up and registered: YTG will design the lease with conditions for the applicant, and the lease will be registered with the Registrar of Lands. Terms of lease renewal and fee schedule will be set.	14
TOTAL TIME FACTOR	DAYS	89 (103)
	MONTHS	3 (3½)

Once an applicant has secured the surface rights to the site, he/she can proceed with construction after obtaining a valid land use permit from DIAND.

LAND USE PERMIT APPLICATION PROCESS

A land use permit is required for any person, agency or company intending to use Territorial lands. A land use permit authorizes a person to carry out a specific land use operation at a specified place, during a stated period of time, and subject to conditions designed to protect the environment.

Permits are issued by DIAND, under the authority of the Territorial Land Use Regulations. A copy of the TLU Regulations is found in the Appendix, with applicable sections highlighted. Guidelines for filling out the application can be obtained at DIAND field offices.

Regulatory Process Overview

All land use operations on Crown land require a Class A or Class B land use permit. Class A permits are required for large projects and operations in areas of environmental sensitivity. Processing of Class A permits involves a longer time factor than for Class B permits (for small operations), which are normally issued within (10) days of application. For the purposes of this guide, a Class A permitting process will be discussed.

A formal review process is conducted for each application for a land use permit.

This process involves the filing of an application, accompanied by the information gathered in the feasibility and planning stages of the project, with a DIAND field office. A copy of this application is found in the Appendix.

Assuming that all information is provided in the first application, the full review process can take a minimum of (3) months. If delays are encountered, the process could take approximately (5) months. The following is a step-by-step summary of the land use permit application process. Included with each step is an approximate time factor for completion of that step; brackets indicate delays which could be avoided with good provision of information. A flow chart accompanies this description (Figure 4), numbered accordingly.

Process Guide		Time Factor (Days)
i)	Application submitted to Land Use Engineer:	3
	The application will be reviewed by the Land Use Engineer, who will consult with other DIAND staff. The Land Use Engineer will usually make a decision within (3) days.	
ii)	(a) Application approval:	1
	The Land Use Engineer may designate a Class A permit and send the approved application to the Land Use Advisory Committee (LUAC) for review.	
	(b) Application rejected:	(7)
	The Land Use Engineer may reject the application and return it to the applicant for more information. Delays will result depending upon response time of the applicant.	
iii)	Review of application by LUAC:	
	(a) Environmentally sensitive areas:	(42)
	If the area described for the project has special environmental considerations, LUAC will take a minimum of (42) days to review the application, do further studies, and discuss the plan with other government departments and special interest groups.	
	(b) Non-sensitive areas:	10
	If the area described for the project is not deemed to be environmentally sensitive, LUAC will review the application and make recommendations within (10) days.	
iv)	Review of application by Land Use Engineer:	3
	The DIAND Land Use Engineer will review the recommendations of LUAC and other government departments and groups in order to reach a decision on the application.	
v)	(a) Engineer approval with conditions:	2
	The land use permit may be approved and issued, containing conditions for environmental protection on the site.	

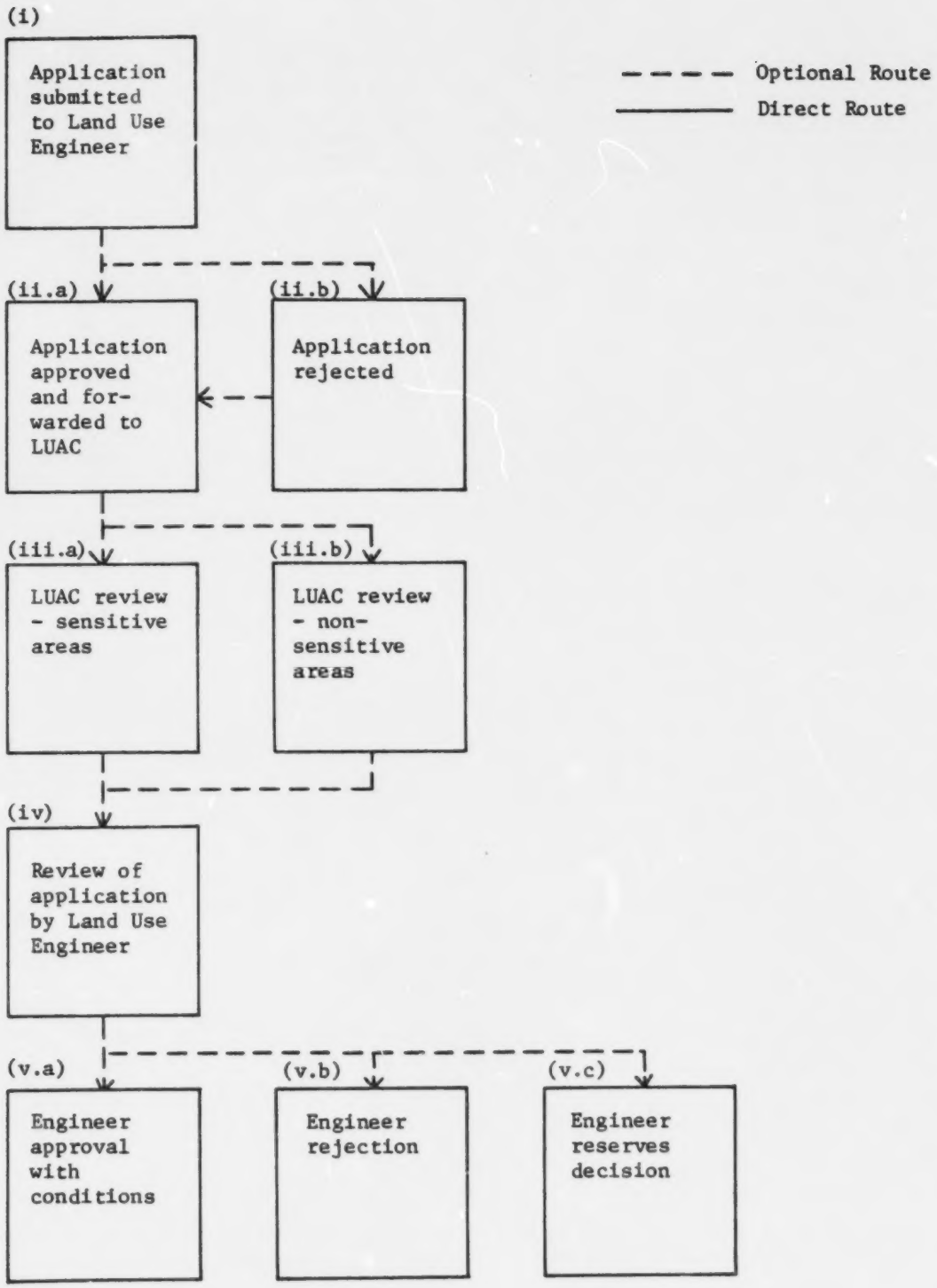

Figure 4: Land Use Permit Application Process

Process Guide (cont'd)	Time Factor (Days)
(b) Engineer rejection:	(7)
The land use permit may be rejected outright or returned to the applicant for more information.	
(c) Engineer reserves decision:	(42) or (365)
The land use permit may be delayed pending further studies on the site by DIAND staff and the applicant. This delay can last (42) days or, in special instances, (1) year.	
TOTAL TIME FACTOR ..... DAYS	19 (136)
MONTHS	1 (5)

Most land use applicants are designated for "environmentally-sensitive" status and given the (42) day processing and review. A minimum time of approximately (2) months is thus common for permitting.

Once an applicant has secured a land use permit, construction on the site can begin. Land use inspections will be carried out by DIAND field staff during construction and operation to ensure that the applicant is adhering to conditions of the permit.

OTHER GOVERNMENT AGENCIES/LICENSING

Full addresses for this list of other agencies concerned can be found in the Appendix.

i) DEPARTMENT OF FISHERIES AND OCEANS

During the feasibility stage, the applicant should contact the DFO office and check for potential conflicts with regard to fish passage and habitat disruption in the watercourse. DFO staff will have information about the presence of fish species in the stream, plus information about regulations pertaining to fish passage.

Under the regulations of the Federal Fisheries Act, the applicant may be required to provide fishway facilities past a control dam, or screening for intake pipes above the dam. If the DFO officials have any conflicts with the applicant's project plans, they

can intervene during the water use licensing process and question the applicant. Provisions for mitigating fisheries conflicts would be included in the water use licence.

ii) NORTHERN CANADA POWER COMMISSION

This Crown Corporation is the principal agency which generates and transmits electrical power in Yukon. Under the mandate of the NCPC Act, the Commission must be notified if power generated from an independent source is tied into the existing power grid. A micro-hydro site which generates power solely for an individual should have no conflicts with the NCPC Act.

iii) TRANSPORT CANADA

Under the terms of the Navigable Waters Act, Transport Canada must be informed of the intent to block passage of a navigable watercourse in Yukon. Transport Canada will regularly review any applications which involve obstruction of waterways. Any conflicts will be discussed through the water use licensing process. Micro-hydro sites on small streams should not contravene the terms of the Navigable Waters Act.

iv) YUKON PUBLIC UTILITIES BOARD

This Board will review any applications for sale of power or tie-in to the existing power grid. A self-contained micro-hydro project would not be reviewed if no sale of power is involved. YPUB has no guidelines in place at the moment to deal with the private sale of power to the existing grid.

v) DIAND QUARRYING PERMIT

If, during the course of construction, the project developer needs additional sources of aggregate or building material which cannot be obtained from the lease site, a quarrying permit will be required from DIAND in order to obtain materials from another source. There is no charge or review process for this permit; application can be made at any DIAND field office.

SUMMARY

As evident from this discussion, the planning for and licensing of a micro-hydro site will be a lengthy and costly process. Feasibility and planning studies can take from (3-6) months to complete. The formal review process for satisfying regulatory agencies has the following minimum time factor for completion:

Water use licence	3 months
Land lease	3 months
Land use permit	2 months

Some overlap is possible in the review process, but 8 months would be the estimate of the minimum time spent in the licensing process.

An applicant can expect to spend at least (1) year in preparation and licence processing before construction can begin. This schedule will probably eliminate all but the most committed of project planners.

The development of a micro-hydro project is a serious endeavour; many environmental considerations must be dealt with in the course of the work. The regulatory process is designed so that these considerations can be incorporated into final project plans. Though lengthy and sometimes confusing, the process can be completed with good background preparation.

APPENDIX I

GOVERNMENT AGENCY ADDRESSES

1) YUKON TERRITORY WATER BOARD
Suite 200, 4114 Fourth Avenue, Whitehorse, Yukon.
Y1A 4N7

2) DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
200 Range Road, Whitehorse, Yukon.
Y1A 3V1

3) REGISTRAR OF LAND TITLES
DEPARTMENT OF JUSTICE, GOVERNMENT OF YUKON
P.O. Box 2703, Whitehorse, Yukon.
Y1A 2C6

4) MINING RECORDER'S OFFICE
DIAND (as above)

5) SUPERVISOR OF LANDS
DIAND (as above)

6) DEPARTMENT OF RENEWABLE RESOURCES, GOVERNMENT OF YUKON
Box 2703, Whitehorse, Yukon.
Y1A 2C6

7) DIRECTOR OF LANDS AND HOUSING
DEPARTMENT OF COMMUNITY AND TRANSPORTATION SERVICES
Box 2703, Whitehorse, Yukon.
Y1A 2C6

8) DEPARTMENT OF FISHERIES AND OCEANS
122 Industrial Road, Whitehorse, Yukon.
Y1A 2T9

9) NORTHERN CANADA POWER COMMISSION
Box 4278, Whitehorse, Yukon.

10) TRANSPORT CANADA
c/o Canadian Coast Guard, Western Region
Box 10060, 700 West Georgia Street, Vancouver, B.C.
V7Y 1E1

CHAPTER 1234

NORTHERN INLAND WATERS ACT

Northern Inland Waters Regulations

REGULATIONS RESPECTING INLAND WATER RESOURCES IN THE YUKON TERRITORY AND NORTHWEST TERRITORIES

Short Title

1. These Regulations may be cited as the *Northern Inland Waters Regulations*.

Interpretation

2. In these Regulations,

"Act" means the *Northern Inland Waters Act*; (*Loi*)

"board" means the Northwest Territories Water Board and the Yukon Territory Water Board; (*office*)

"controller" means the Controller of Water Rights for the Yukon Territory and the Controller of Water Rights for the Northwest Territories; (*contrôleur*)

"groundwater" means all water in a zone of saturation beneath the land surface regardless of its origin and quality; (*eau souterraine*)

"stream" means any natural watercourse or source of water supply, whether usually containing water or not, and without limiting the generality of the foregoing, includes any groundwater, lake, river, creek, spring, ravine, swamp and gulch; (*cours d'eau*)

"work" means any undertaking capable of or used or to be used for diverting, storing, measuring, conserving, conveying, retarding, confining or using water, for producing, measuring, transmitting or using electricity, for collecting, conveying or disposing of sewage or garbage, or for preventing or extinguishing fire, and includes access roads used in connection with such undertaking and the placing of booms and piles in, and the removal of obstructions from, the banks and beds of streams. (*travaux*)

PART I

WATER MANAGEMENT AREAS NORTHWEST TERRITORIES

3. (1) The following geographical areas in the Northwest Territories are established on the recommendation of the Minister and of the Northwest Territories Water Board as water management areas:

(*a*) effective September 14, 1972,

CHAPITRE 1234

LOI SUR LES EAUX INTÉRIEURES DU NORD

Règlement sur les eaux intérieures du Nord

RÈGLEMENT CONCERNANT LES RESSOURCES EN EAUX INTÉRIEURES DU TERRITOIRE DU YUKON ET DES TERRITOIRES DU NORD-OUEST

Titre abrégé

1. Le présent règlement peut être cité sous le titre: *Règlement sur les eaux intérieures du Nord*.

Interprétation

2. Dans le présent règlement,

«contrôleur» désigne le contrôleur des droits d'utilisation des eaux du territoire du Yukon et le contrôleur des droits d'utilisation des eaux des territoires du Nord-Ouest; (*controller*)

«cours d'eau» désigne tout cours d'eau naturel ou toute source d'eau, qu'il contienne habituellement de l'eau ou non et, sans restreindre la portée générale de ce qui précède, comprend toute eau souterraine, lac, rivière, ruisseau, source, ravin et marécage; (*stream*)

«eau souterraine» désigne toute l'eau d'une zone de saturation souterraine, indépendamment de leur origine et de leur qualité; (*groundwater*)

«Loi» désigne la *Loi sur les eaux intérieures du Nord*; (*Act*)

«office» désigne l'office des eaux des territoires du Nord-Ouest et l'Office des eaux du territoire du Yukon; (*board*)

«travaux» désigne toute activité propre et servant ou devant servir à dériver, accumuler, mesurer, conserver, transporter, retarder, renfermer ou utiliser de l'eau; à produire, mesurer, transporter ou utiliser de l'électricité; à ramasser, transporter ou supprimer des matières d'égout ou des déchets, ou à prévenir ou éteindre des incendies; le terme vaut aussi pour les routes d'accès utilisées dans l'exercice de cette activité, et pour l'installation d'estacades et de pieux et l'enlèvement d'obstacles sur les rives et dans les lits des cours d'eau. (*work*)

PARTIE I

ZONES DE GESTION DES EAUX TERRITOIRES DU NORD-OUEST

3. (1) Sur la recommandation du Ministre et de l'Office des eaux des territoires du Nord-Ouest, les régions géographiques des territoires du Nord-Ouest mentionnées ci-après sont déclarées zones de gestion des eaux:

a) à compter du 14 septembre 1972,

(i) (No. 1) Great Slave Lake, all waters draining into Great Slave Lake, and all the river basins draining into Great Slave Lake,

(ii) (No. 2) Great Bear Lake, all waters draining into Great Bear Lake and all the river basins draining into Great Bear Lake, the Great Bear River and its tributaries and all the river basins of the Great Bear River and its tributaries, and

(iii) (No. 3) the Mackenzie River and its tributaries and all the river basins of the Mackenzie River and its tributaries;

(*b*) effective January 1, 1973,

(i) (No. 4) all of the islands in James Bay, Hudson Bay and Hudson Strait and all the Arctic Islands except Baffin Island, and

(ii) (No. 5) Baffin Island; and

(*c*) effective June 1, 1973,

(i) (No. 6) all waters of the mainland draining into Hudson Bay and Foxe Basin and all the river basins of the mainland draining into Hudson Bay and Foxe Basin, and

(ii) (No. 7) all waters of the mainland draining into the Arctic Ocean and adjacent waters and all the river basins of the mainland draining into the Arctic Ocean and adjacent waters, except those waters and river basins described in paragraph (*a*) and subparagraph (i) of this paragraph.

YUKON TERRITORY

(2) The following geographical areas in the Yukon Territory are established on the recommendation of the Minister and the Yukon Territory Water Board as water management areas:

(*a*) effective September 14, 1972,

(i) (No. 1) the Liard River and its tributaries and all the river basins of the Liard River and its tributaries,

(ii) (No. 2) the Yukon River and its tributaries and all the river basins of the Yukon River and its tributaries, and

(iii) (No. 3) the Alsek River and its tributaries and all the river basins of the Alsek River and its tributaries; and

(*b*) effective April 1, 1973,

(i) (No. 4) the Peel River and its tributaries and all the river basins of the Peel River and its tributaries,

(ii) (No. 5) the Porcupine River and its tributaries and all the river basins of the Porcupine River and its tributaries, and

(iii) (No. 6) all waters of the mainland draining into the Beaufort Sea and all the river basins of the mainland draining into the Beaufort Sea, and Herschel Island.

Application

4. This Part applies to the water management areas established by section 3.

Classification of Uses of Water

5. The uses of water in the Yukon Territory and in the Northwest Territories are classified as follows:

(i) (N° 1) le Grand lac des Esclaves ainsi que toutes les eaux et tous les bassins fluviaux qui se déversent dans ledit lac,

(ii) (N° 2) le Grand lac de l'Ours ainsi que toutes les eaux et tous les bassins fluviaux qui se déversent dans ledit lac; la Grande rivière de l'Ours et ses affluents ainsi que tous les bassins fluviaux de ladite rivière et de ses affluents, et

(iii) (N° 3) le fleuve Mackenzie et ses affluents ainsi que tous les bassins fluviaux dudit fleuve et de ses affluents;

b) à compter du 1er janvier 1973,

(i) (N° 4) toutes les îles de la baie James, de la baie d'Hudson et du détroit d'Hudson ainsi que toutes les îles de l'Arctique, à l'exception de l'île Baffin, et

(ii) (N° 5) l'île Baffin; et

c) à compter du 1er juin 1973,

(i) (N° 6) toutes les eaux de la terre ferme qui se déversent dans la baie d'Hudson et dans le bassin Foxe et tous les bassins fluviaux de la terre ferme qui se déversent dans ladite baie et dans ledit bassin, et

(ii) (N° 7) toutes les eaux de la terre ferme qui se déversent dans l'océan Arctique et dans les eaux contiguës et tous les bassins fluviaux de la terre ferme qui se déversent dans ledit océan et dans lesdites eaux à l'exception des eaux et des bassins fluviaux désignés à l'alinéa *a*) et au sous-alinéa (i) du présent alinéa.

TERRITOIRE DU YUKON

(2) Sur la recommandation du Ministre et de l'Office des eaux du territoire du Yukon, les régions géographiques du territoire du Yukon mentionnées ci-après sont déclarées zones de gestion des eaux:

a) à compter du 14 septembre 1972,

(i) (N° 1) la rivière Liard et ses affluents et tous les bassins fluviaux de ladite rivière et de ses affluents,

(ii) (N° 2) le fleuve Yukon et ses affluents et tous les bassins fluviaux dudit fleuve et de ses affluents, et

(iii) (N° 3) la rivière Alsek et ses affluents et tous les bassins fluviaux de ladite rivière et de ses affluents; et

b) à compter du 1er avril 1973,

(i) (N° 4) la rivière Peel et ses affluents et tous les bassins fluviaux de ladite rivière et de ses affluents,

(ii) (N° 5) la rivière Porcupine et ses affluents et tous les bassins fluviaux de ladite rivière et de ses affluents, et

(iii) (N° 6) toutes les eaux de la terre ferme qui se déversent dans la mer de Beaufort et tous les bassins fluviaux de la terre ferme qui se déversent dans ladite mer, ainsi que l'île Herschel.

Application

4. La présente partie concerne les zones de gestion des eaux établies à l'article 3.

Catégories d'usages des eaux

5. Les usages des eaux du territoire du Yukon et des territoires du Nord-Ouest sont classés comme suit:

(*a*) "a use for agricultural purposes" being the use of water on cultivated lands and hay meadows for nourishing crops or for providing water for livestock;

(*b*) "a use for conservation purposes" being the use or storage of waters or the construction of works in and about waters for preserving, protecting or improving the existing or natural environment;

(*c*) "a use for industrial purposes" being the use of water for manufacturing processes, mining, hydraulicking, fluming, oil and gas production or for any other industrial purpose;

(*d*) "a use for municipal purposes" being the use of water in a community or settlement comprising a multiplicity of domestic units where the water is used for domestic, horticultural, fire protection, commercial, industrial or any other purpose for which water is usually supplied by a municipal water system;

(*e*) "a use for Class 1 power purposes" being the use of water for the authorized production of less than 5,000 kilowatts;

(*f*) "a use for Class 2 power purposes" being the use of water for the authorized production of 5,000 to 10,000 kilowatts;

(*g*) "a use for Class 3 power purposes" being the use of water for the authorized production of 10,000 to 20,000 kilowatts;

(*h*) "a use for Class 4 power purposes" being the use of water for the authorized production of 20,000 to 50,000 kilowatts;

(*i*) "a use for Class 5 power purposes" being the use of water for the authorized production of 50,000 to 100,000 kilowatts;

(*j*) "a use for Class 6 power purposes" being the use of water for the authorized production of more than 100,000 kilowatts;

(*k*) "a use for water engineering purposes" being

(i) the clearing, improving or other modification of the bed, channel or banks of a stream, or

(ii) the laying, placing, building or erecting of any structure, device or contrivance in, over, under or upon any waters;

(*l*) "a use for storage purposes" being the collecting or impounding of water to provide for the regulation of stream flow; and

(*m*) "a use for recreational purposes" being the collecting or impounding of water for a commercial recreational or public recreational development.

Water Use Register

6. (1) The water use register referred to in section 19 of the Act shall be in the form set out in Schedule I and shall contain the information required by that form.

(2) The fee payable for each inspection of a water use register is $3.

d) «usage à des fins agricoles» soit l'utilisation de l'eau dans les terres cultivées et les zones fourragères pour arroser les cultures et approvisionner les bestiaux en eau;

b) «usage à des fins de conservation» soit l'utilisation ou l'accumulation des eaux ou la construction d'ouvrages dans des étendues d'eau ou à proximité de ces dernières en vue de conserver, de protéger ou d'améliorer l'environnement naturel;

c) «usage à des fins industrielles» soit l'utilisation de l'eau dans des procédés de fabrication, l'exploitation minière, les travaux hydrauliques, le transport par canalisation, la production du pétrole et du gaz ou à toute autre fin industrielle;

d) «usage à des fins municipales» soit l'utilisation de l'eau dans une localité ou agglomération comprenant un grand nombre d'unités domestiques où l'eau sert à des fins domestiques, à l'horticulture, à la protection contre les incendies, à des fins commerciales, industrielles ou à d'autres activités pour lesquelles l'eau est habituellement fournie par un réseau municipal;

e) «usage à des fins de production d'électricité de classe 1» soit l'utilisation de l'eau pour une production autorisée inférieure à 5,000 kilowatts;

f) «usage à des fins de production d'électricité de classe 2» soit l'utilisation de l'eau pour une production autorisée de 5,000 à 10,000 kilowatts;

g) «usage à des fins de production d'électricité de classe 3» soit l'utilisation de l'eau pour une production autorisée de 10,000 à 20,000 kilowatts;

h) «usage à des fins de production d'électricité de classe 4» soit l'utilisation de l'eau pour une production autorisée de 20,000 à 50,000 kilowatts;

i) «usage à des fins de production d'électricité de classe 5» soit l'utilisation de l'eau pour une production autorisée de 50,000 à 100,000 kilowatts;

j) «usage à des fins de production d'électricité de classe 6» soit l'utilisation de l'eau pour une production autorisée supérieure à 100,000 kilowatts;

k) «usage à des fins de génie hydraulique» soit

(i) le travail de dégagement, d'amélioration ou de modification du lit, du chenal ou des rives d'un cours d'eau, ou

(ii) la pose, l'installation, la construction ou la mise en place d'un dispositif, appareil ou engin quelconque à l'intérieur, au-dessus, au-dessous ou à la surface de toute étendue d'eau;

l) «usage à des fins d'emmagasinage» soit l'accumulation ou l'endiguement de l'eau pour régulariser le débit d'un cours d'eau; et

m) «usage à des fins récréatives» soit l'accumulation ou l'endiguement de l'eau pour l'aménagement d'une zone de loisirs commerciale ou publique.

Registre d'utilisation des eaux

6. (1) Le registre d'utilisation des eaux mentionné à l'article 19 de la Loi doit être en la forme établie à l'annexe I et doit contenir les renseignements qui y sont prescrits.

(2) Pour chaque consultation d'un registre d'utilisation des eaux, le droit exigible est de $3.

Licences

7. (1) An application for a licence or for the amendment or renewal of a licence shall be filed with the appropriate board together with the fee prescribed for that application by section 9.

(2) An application described in subsection (1) shall be filed in duplicate in the form set out in Schedule II and shall contain the information required by that form and section 8.

Surveys and Design Requirements

8. Every application for a licence to use water shall contain the following additional information:

(*a*) where the proposed work consists of a dam, a plan showing the length and height of the dam with cross-sections and elevations, the location and preliminary designs of spillways, canals, sluice pipes and all other outlet works, and data respecting the type and composition of the material to be used in the construction;

(*b*) where the proposed work consists of a storage reservoir, an estimate of the approximate number of acres of land to be flooded, the approximate surface area in acres of the reservoir when filled, the contemplated total storage capacity, and representative cross-sections;

(*c*) where the proposed work consists of a water crossing, a plan of the crossing with cross-sections and elevations, a description of the existing bed of the water body together with photographs of the banks, and any available data on water flow;

(*d*) where the proposed water use is for a municipal purpose, a plan showing the location, area and boundaries of the municipal district, the approximate population, the present indebtedness of the municipal district and its borrowing limit, and a plan of the intended system with cross-sections and elevations; and

(*e*) where the proposed water use is for an industrial purpose, a description of the industrial operation and details of the treatment of waste water and effluents likely to be discharged.

Application Fees

9. The fee payable on the filing of an application for a licence or for the amendment or renewal of a licence is $10.

Water Use Fees

10. (1) The annual fees payable by licensees for the use of waters are as follows:

(*a*) where the licence is for a use for agricultural purposes, $0.05 for each acre-foot authorized by the licence but not less than $10;

(*b*) where the licence is for a use for industrial purposes, the greater of $10 or

Permis

7. (1) Les demandes d'obtention, de modification ou de renouvellement de permis doivent être présentées à l'office concerné et être accompagnées du droit prescrit à cet égard à l'article 9.

(2) Les demandes mentionnées au paragraphe (1) doivent être présentées en double copie, en la forme prescrite à l'annexe II, et doivent porter les renseignements prescrits selon cette formule et selon les dispositions de l'article 8.

Renseignements techniques

8. Toute demande de permis en vue d'utiliser des eaux doit porter les renseignements supplémentaires suivants:

a) lorsque les travaux projetés consistent en un barrage, un plan indiquant la longueur et la hauteur du barrage ainsi que des coupes transversales et des élévations de la construction, l'emplacement et l'avant-projet des passes-déversoirs, des canaux, des tuyaux de vannage et de tous les autres dispositifs de vannage, de même que des renseignements au sujet du type et de la composition des matériaux qui seront employés;

b) lorsque les travaux projetés consistent en un réservoir de retenue, une estimation du nombre d'acres de terres qui seront submergées, la superficie approximative (en acres) du réservoir une fois qu'il sera rempli, la capacité d'accumulation totale prévue ainsi que des coupes transversales représentatives;

c) lorsque les travaux projetés consistent en un passage d'eau, un plan de ce passage avec des coupes transversales et des élévations, une description du lit existant de la nappe d'eau accompagnée de photographies de ses rives ainsi que tout autre renseignement accessible sur l'écoulement de l'eau;

d) lorsque l'utilisation d'eau projetée est destinée à des fins municipales, un plan indiquant l'emplacement, la zone et les limites du district municipal, ainsi que sa population approximative, ses créances et dettes actuelles et ses possibilités d'emprunt, de même qu'un plan du réseau projeté avec des coupes transversales et élévations; et

e) lorsque l'utilisation d'eau projetée est destinée à des fins industrielles, une description de l'exploitation industrielle et des détails sur le traitement des eaux résiduaires et des effluents susceptibles d'y être déversés.

Droits relatifs aux demandes

9. Le droit exigible au moment de la présentation d'une demande de permis ou d'une demande de modification ou de renouvellement d'un permis est de $10.

Droits d'usage des eaux

10. (1) Les droits annuels exigibles des titulaires de permis pour l'utilisation des eaux sont les suivants:

a) lorsque le permis est en vue d'un usage à des fins agricoles, $0.05 pour chaque acre-pied autorisé par le permis, le droit minimal étant de $10;

b) lorsque le permis est en vue d'un usage à des fins industrielles, le plus élevé des montants suivants: $10 ou

(i) $1 for each 10,000 gallons a day up to 500,000 gallons a day authorized by the licence,

(ii) $0.50 for each 10,000 gallons over 500,000 gallons a day up to 1 million gallons a day authorized by the licence, and

(iii) $0.10 for each 10,000 gallons over 1 million gallons a day authorized by the licence; and

(*c*) where the licence is for a use for power purposes,

(i) $1,500 for a Class 1 power purpose,

(ii) $4,000 for a Class 2 power purpose,

(iii) $10,000 for a Class 3 power purpose,

(iv) $30,000 for a Class 4 power purpose,

(v) $80,000 for a Class 5 power purpose,

(vi) $90,000 for a Class 6 power purpose.

Authorization to Use Water Without a Licence

11. Water may be used without a licence having been issued if the controller has stated in writing that he is satisfied that the proposed use would meet the applicable requirement of subsection 10(1) of the Act if an application described in that section for that use were made and

(*a*) the proposed use is

(i) for municipal purposes by an unincorporated settlement, or

(ii) for water engineering purposes;

(*b*) the proposed use will continue for a period of less than 270 days; or

(*c*) the quantity proposed to be used is less than 50,000 gallons per day.

Expropriation of Land

12. Where a licensee applies to the appropriate board for permission from the Minister to enter upon, use, occupy, take and acquire any lands or any interest therein, he shall submit to the board

(*a*) a legal description of the lands or interest required and the name, address and occupation of every registered owner of an interest therein;

(*b*) a statement of the attempts made to acquire the lands or interest; and

(*c*) any other information relevant to the lands or interest.

Security

13. (1) The board may require an applicant for a licence to furnish security in an amount determined by the board, but in no case shall the amount exceed $100,000 or 10 per cent of the estimated capital cost of the work, whichever is the greater.

(i) $1 pour chaque quantité de 10,000 gallons utilisée par jour, jusqu'à concurrence de la limite journalière de 500,000 gallons autorisée par le permis,

(ii) $0.50 pour chaque quantité de 10,000 gallons au-delà de 500,000 gallons par jour, jusqu'à concurrence de la limite journalière de 1,000,000 de gallons autorisée par le permis, et

(iii) $0.10 pour chaque quantité de 10,000 gallons au-delà de la limite journalière de 1,000,000 de gallons autorisée par le permis; et

c) lorsque le permis est en vue d'un usage aux fins de production d'électricité

(i) $1,500 pour la production d'électricité de classe 1,

(ii) $4,000 pour la production d'électricité de classe 2,

(iii) $10,000 pour la production d'électricité de classe 3,

(iv) $30,000 pour la production d'électricité de classe 4,

(v) $80,000 pour la production d'électricité de classe 5,

(vi) $90,000 pour la production d'électricité de classe 6

Autorisation d'utiliser des eaux sans permis

11. Le contrôleur peut autoriser l'utilisation d'eaux sans permis s'il est convaincu que l'usage projeté est conforme aux conditions prévues au paragraphe 10(1) de la Loi, lorsqu'une demande, à cet effet a été présentée et que

a) l'usage projeté est destiné

(i) à des fins municipales pour une localité non constituée en municipalité, ou

(ii) à des fins de génie hydraulique;

b) l'usage projeté se poursuivra pendant moins de 270 jours, ou

c) la quantité d'eau utilisée sera inférieure à 50,000 gallons par jour.

Expropriation de terrains

12. Lorsque le titulaire d'un permis présente une demande à l'office compétent en vue d'obtenir du Ministre l'autorisation d'entrer sur tout terrain, d'utiliser, d'occuper, de prendre ou d'acquérir tout terrain ou tout droit réel immobilier qui s'y rattache, il doit fournir audit office

a) une description officielle des terrains ou du droit réel immobilier nécessaire ainsi que le nom, l'adresse et la profession de toute personne, dûment inscrite comme titulaire d'un droit réel immobilier sur lesdits terrains;

b) une déclaration au sujet des tentatives faites en vue d'acquérir les terrains ou le droit réel immobilier; et

c) tout autre renseignement relatif au terrain ou au droit réel immobilier.

Garantie

13. (1) L'office peut exiger du requérant d'un permis qu'il fournisse une garantie d'un montant que ledit office détermine, mais ledit montant ne doit jamais être supérieur à $100,000 ou à 10 pour cent du montant estimatif des immobilisations exigées pour l'exécution des travaux, en prenant le montant le plus élevé.

(2) Where a board requires an applicant for a licence to furnish security, the security shall be in the form of

(*a*) a promissory note guaranteed by a chartered bank in Canada payable to the Receiver General;

(*b*) a certified cheque drawn on a chartered bank in Canada payable to the Receiver General;

(*c*) a performance bond issued by a surety approved by the Treasury Board for the purposes of the *Government Contract Regulations*; or

(*d*) any combination of the securities described in paragraphs (*a*) to (*c*).

(3) The security referred to in subsection (1) shall be refunded when the board is satisfied that the licensee has completed or discontinued the work appurtenant to his licence and has complied with the terms and conditions of his licence and these Regulations.

(4) Where the licensee has not complied with all the terms and conditions of his licence or these Regulations, the board may refund such part of the security as, in the opinion of the board, the circumstances justify.

Assignment of a Licence

14. An application for authorization to assign a licence shall be filed with the appropriate board together with a fee of $10 not less than 90 days prior to the proposed effective date of the assignment and shall contain the name and address of the assignee.

Reports

15. (1) Every licensee shall keep true and detailed books and records of the quantity of water used under his licence and shall file a report each year with the appropriate board.

(2) The report filed pursuant to subsection (1) shall be

(*a*) based on and be an accurate summary of the books and records kept pursuant to subsection (1), and

(*b*) certified by

(i) the licensee, where the licensee is an individual, or

(ii) an officer of the licensee authorized for that purpose, where the licensee is a corporation.

PART II

DEPOSIT OF WASTE

16. A person may, when using water for domestic purposes, deposit or permit the deposit of waste if the waste is of a type and in a quantity and is deposited under conditions authorized by or under the *Public Health Ordinance* of the Northwest Territories or the *Public Health Ordinance* of the Yukon Territory, whichever is applicable.

(2) Lorsqu'un office exige du requérant qu'il fournisse une garantie, ladite garantie doit être en la forme

a) d'un billet à ordre garanti par une banque à charte du Canada et établi à l'ordre du receveur général;

b) d'un chèque visé tiré sur une banque à charte du Canada et établi à l'ordre du receveur général;

c) d'un cautionnement d'exécution délivré par une caution approuvée par le conseil du Trésor pour l'application du *Règlement sur les marchés de l'État*; ou

d) d'une combinaison des garanties mentionnées aux alinéas *a*) à *c*).

(3) La garantie mentionnée au paragraphe (1) doit être remboursée lorsque l'office est convaincu que le titulaire du permis a terminé ou interrompu les travaux autorisés par son permis et qu'il s'est conformé aux modalités énoncées dans ledit permis et dans le présent règlement.

(4) Lorsque le titulaire du permis ne s'est pas conformé à toutes les modalités énoncées dans son permis ou dans le présent règlement, l'office peut rembourser la partie de la garantie qui s'impose, de l'avis de l'office, compte tenu des circonstances.

Cession de permis

14. Toute demande d'autorisation de cession de permis doit être présentée à l'office concerné accompagnée d'un droit de $10, au moins 90 jours avant la date de cession projetée et doit porter le nom et l'adresse du cessionnaire.

Rapports

15. (1) Tout titulaire de permis doit conserver des livres et relevés exacts et détaillés relatifs à la quantité d'eau qu'il utilise en vertu de son permis et doit présenter annuellement un rapport à l'office concerné.

(2) Le rapport présenté conformément au paragraphe (1) doit être

a) fondé sur les livres et relevés conservés conformément au paragraphe (1) et en être un résumé exact; et

b) attesté par

(i) le titulaire du permis, lorsque celui-ci est un particulier, ou par

(ii) un agent du titulaire du permis, autorisé à cette fin, lorsque ledit titulaire est une corporation.

PARTIE II

DÉPÔT DE DÉCHETS

16. Lorsqu'une personne utilise de l'eau à des fins domestiques, elle peut déposer ou permettre de déposer des déchets s'il s'agit d'un dépôt qui, étant donné le genre et la quantité des déchets déposés et les conditions dans lesquelles ils sont déposés, est autorisé par le *Public Health Ordinance* des territoires du Nord-Ouest ou par le *Public Health Ordinance* du territoire du Yukon ou en vertu de l'un d'eux, selon le cas.

SCHEDULE I

(s. 6)

WATER USE REGISTER

Date Filed	No.
Applicant	
Water Management Area	Location

Purpose of Undertaking	Water Use	Quantity of Water

Studies *Subject*	*Date requested–Date received*

Fees Application	Water Use	Date of Licence	Term of Licence
$.....	$.....		

ANNEXE I

(art. 6)

REGISTRE D'UTILISATION DES EAUX

Date de présentation	N°
Requérant	
Zone de gestion des eaux	Emplacement

But des travaux projetés	Usage de l'eau	Quantité d'eau

Études *Objet*	*Date de requête–Date de réception*

Droits Demande	Usage de l'eau	Date de délivrance du permis	Durée de validité du permis
$.....	$.....		

SCHEDULE II

(s. 7)

APPLICATION FOR LICENCE, AMENDMENT OF LICENCE OR RENEWAL OF LICENCE

Department of Indian Affairs and Northern Development
Water, Forests and Land Division

	No.
1. Name and Mailing Address	2. Address of Head Office in Canada if incorporated
3. Location of Undertaking–describe and attach map, naming river, creek, lake, spring or groundwater reservoir	
4. Nature of Undertaking–describe and attach plans	

5. Purpose of Undertaking (1) To obtain water (2) To divert water (3) To store water (4) To alter the flow of water (5) To return a flow of water (6) Other (specify)	6. Water Use Classification (1) Agriculture (2) Conservation (3) Industrial (4) Municipal (5) Power (6) River Improvement (7) Storage
7. Quantity of Water Involved–(cubic feet per second, gallons per day, acre feet per year)	8. Quality of Returned Water (1) Unaltered (2) Altered (specify)

ANNEXE II

(art. 7)

DEMANDE D'OBTENTION, DE MODIFICATION OU DE RENOUVELLEMENT DE PERMIS

Ministère des Affaires indiennes et du Nord canadien
Division des eaux, des forêts et des terres

	N°
1. Nom et adresse postale	2. Adresse du siège social au Canada, s'il s'agit d'un corps constitué
3. Lieu de l'entreprise–donner une description, joindre une carte et mentionner le nom de la rivière, du ruisseau, du lac, de la source ou du réservoir souterrain	
4. Nature de l'entreprise–donner une description et joindre les plans	

5. But de l'entreprise (1) obtenir de l'eau (2) détourner des eaux (3) accumuler de l'eau (4) modifier un cours d'eau (5) renvoyer de l'eau d'un cours d'eau (6) autre but (préciser)	6. Catégories d'usage de l'eau (1) pour fins agricoles (2) pour fins de conservation (3) pour fins industrielles (4) pour fins municipales (5) pour fins de production d'électricité (6) pour fins d'amélioration d'un cours d'eau (7) pour fins d'accumulation
7. Quantité d'eau en cause–(nombre de pieds cubes par seconde, de gallons par jour, de pieds-acres par année)	8. Qualité de l'eau renvoyée (1) non modifiée (2) modifiée (préciser)

SCHEDULE II–*Conc.*

APPLICATION FOR LICENCE, AMENDMENT OF LICENCE OR RENEWAL OF LICENCE–*Conc.*

9. Other Properties Affected by this Undertaking–describe location and list owners

10. Contractor and Sub-Contractors Names and Addresses	Functions
11. Time Schedule Proposed Start Completion	12. Fees Application $..... Water Use $..... Total $.....

....
Signature *Title* *Date*

ANNEXE II–*Fin*

DEMANDE D'OBTENTION, DE MODIFICATION OU DE RENOUVELLEMENT DE PERMIS–*Fin*

9. Autres biens visés par cette entreprise–indiquer leur emplacement et donner la liste de leurs propriétaires

10. Entrepreneur et sous-traitants Noms et adresses	Fonctions
11. Calendrier de travail projeté Début Achèvement	12. Droits Demande $..... Usage de l'eau $..... Total $.....

....
Signature *Titre* *Date*

FOR OFFICE USE ONLY

Application Fee	Water Use Fee	Application	
Amount $.....	*Amount* $	*Approved by*	*Filed in Water Use Register*
Receipt No.	*Receipt No.*		
Date	*Date*	..... 19..	..... 19..

À L'USAGE EXCLUSIF DU BUREAU

Droit relatif à la demande	Droit relatif à l'usage de l'eau	Demande	
Montant $.....	*Montant* $.....	*Approuvée par*	*Inscrite au registre d'utilisation des eaux*
N° du reçu	*N° du reçu*		
Date	*Date*	*le* .... 19..	*le* .... 19..

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OTTAWA, 1978

Registration
SOR/82-767 6 August, 1982

NORTHERN INLAND WATERS ACT

Northern Inland Waters Regulations, amendment

P.C. 1982-2360 5 August, 1982

His Excellency the Governor General in Council, on the recommendation of the Minister of Indian Affairs and Northern Development, the Northwest Territories Water Board and the Yukon Territory Water Board, pursuant to sections 26 and 28 of the Northern Inland Waters Act, is pleased hereby to amend the Northern Inland Waters Regulations, C.R.C., c. 1234, in accordance with the schedule hereto.

SCHEDULE

1 Paragraphs 5(*d*) and (*e*) of the *Northern Inland Waters Regulations* are revoked and the following substituted therefor:

"(*d*) "a use for municipal purposes" being the use of water in a community or settlement or construction camp comprising a multiplicity of domestic units where the water is used for domestic, horticultural, fire protection, commercial, industrial or other purpose for which water is usually supplied by a municipal or construction camp water system;

(*e*) "a use for Class 0 power purposes" being the use of water for the authorized production of not more than 150 kilowatts;

(*e.1*) "a use for Class 1 power purposes" being the use of water for the authorized production of more than 150 kilowatts but less than 5,000 kilowatts;"

2 Subparagraph 10(1)(*c*)(i) of the said Regulations is revoked and the following substituted therefor:

"(i) nil for a Class 0 power purpose,

(i.1) $1,500 for a Class 1 power purpose,"

3 Subparagraph 11(*a*)(i) of the said Regulations is revoked and the following substituted therefor:

"(i) for municipal purposes by an unincorporated settlement or construction camp, or"

Enregistrement
DORS/82-767 6 août 1982

LOI SUR LES EAUX INTÉRIEURES DU NORD

Règlement sur les eaux intérieures du Nord—Modification

C.P. 1982-2360 5 août 1982

Sur avis conforme du ministre des Affaires indiennes et du Nord canadien, de l'Office des eaux des territoires du Nord-Ouest et de l'Office des eaux du territoire du Yukon, et en vertu des articles 26 et 28 de la Loi sur les eaux intérieures du Nord, il plaît à Son Excellence le Gouverneur général en conseil de modifier, conformément à l'annexe ci-après, le Règlement sur les eaux intérieures du Nord, C.R.C., c. 1234.

ANNEXE

1 (1) Les alinéas 5*d*) et *e*) du *Règlement sur les eaux intérieures du Nord* sont abrogés et remplacés par ce qui suit:

«*d*) «usage à des fins municipales» soit l'utilisation de l'eau dans une localité, une agglomération ou un camp de chantier de construction, qui comprend un grand nombre d'unités domestiques où l'eau sert à des fins domestiques, à l'horticulture, à la protection contre les incendies, à des fins commerciales ou industrielles ou à d'autres activités pour lesquelles l'eau est habituellement fournie par un réseau d'alimentation en eau d'une municipalité ou d'un camp de chantier de construction;

e) «usage à des fins de production d'électricité de classe 0» soit l'utilisation de l'eau pour une production autorisée d'au plus 150 kilowatts;

e.1) «usage à des fins de production d'électricité de classe 1» soit l'utilisation de l'eau pour une production autorisée supérieure à 150 kilowatts et inférieure à 5,000 kilowatts.»

2. Le sous-alinéa 10(1)*c*)(i) dudit règlement est abrogé et remplacé par ce qui suit:

«(i) aucun droit pour la production d'électricité de classe 0,

(i.1) $1,500 pour la production d'électricité de classe 1,»

3. Le sous-alinéa 11*a*)(i) dudit règlement est abrogé et remplacé par ce qui suit:

«(i) à des fins municipales pour une localité non constituée en municipalité ou un camp de chantier de construction, ou»

EXPLANATORY NOTE

(This note is not part of the Regulation, but is intended only for information purposes.)

This amendment allows the Controller of Water Rights to authorize the use of water without a licence for construction camp purposes and eliminates the water use fee for the development of small scale hydroelectric projects.

NOTE EXPLICATIVE

(La présente note ne fait pas partie du règlement et n'est publiée qu'à titre d'information.)

Ces modifications visent à permettre au contrôleur des droits d'utilisation de l'eau d'autoriser l'usage de l'eau sans permis pour les fins d'un camp de chantier de construction et à supprimer les droits d'utilisation de l'eau qui sert aux fins des projets de construction de centrales hydro-électriques de petite envergure.

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Registration
SOR/84-157 7 February, 1984

NORTHERN INLAND WATERS ACT

Northern Inland Waters Regulations, amendment

P.C. 1984-407 7 February, 1984

His Excellency the Governor General in Council, on the recommendation of the Minister of Indian Affairs and Northern Development, pursuant to paragraph 26(*g*) of the Northern Inland Waters Act, is pleased hereby to amend the Northern Inland Waters Regulations, C.R.C., c. 1234, in accordance with the schedule hereto.

SCHEDULE

1. Section 11[1] of the *Northern Inland Waters Regulations* is revoked and the following substituted therefor:

"11. Water within a water management area may, without a licence, be used

(*a*) for municipal purposes by an unincorporated settlement or a construction camp;

(*b*) for water engineering purposes; or

(*c*) for any purpose not referred to in paragraph (*a*) or (*b*), at a rate not in excess of 50,000 gallons per day."

EXPLANATORY NOTE

(This note is not part of the Regulation, but is intended only for information purposes.)

This amendment deletes the requirement for a written statement by the controller of water rights, and the time limitation period.

[1] SOR/82-767, 1982 *Canada Gazette* Part II, p. 2777

Enregistrement
DORS/84-157 7 février 1984

LOI SUR LES EAUX INTÉRIEURES DU NORD

Règlement sur les eaux intérieures du Nord—Modification

C.P. 1984-407 7 février 1984

Sur avis conforme du ministre des Affaires indiennes et du Nord canadien, et en vertu de l'alinéa 26*g*) de la Loi sur les eaux intérieures du Nord, il plaît à Son Excellence le Gouverneur général en conseil de modifier, conformément à l'annexe ci-après, le Règlement sur les eaux intérieures du Nord, C.R.C., c. 1234.

ANNEXE

1. L'article 11[1] du *Règlement sur les eaux intérieures du Nord* est abrogé et remplacé par ce qui suit:

«11. Dans une zone de gestion des eaux, les eaux peuvent être utilisées sans permis

a) à des fins municipales, par une localité non constituée en municipalité, ou par un camp de chantier de construction;

b) à des fins de génie hydraulique; ou

c) à des fins non visées aux alinéas *a*) ou *b*), à un régime n'excédant pas 50,000 gallons par jour.»

NOTE EXPLICATIVE

(La présente note ne fait pas partie du règlement et n'est publiée qu'à titre d'information.)

Cette modification supprime l'obligation d'obtenir une autorisation écrite du contrôleur des droits d'utilisation des eaux et le délai d'utilisation prévu.

[1] DORS/82-767, *Gazette du Canada* Partie II, 1982, p. 2777

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Indian and Northern Affairs / Affaires indiennes et du Nord

SCHEDULE II

Application for Licence, Amendment of Licence or Renewal of Licence

No.

1. Name and Mailing Address	2. Address of Head Office in Canada if Incorporated

3. Location of Undertaking - Describe and attach map, naming river, creek, lake, spring or groundwater reservoir

4. Nature of Undertaking - describe and attach plans

5. Purpose of Undertaking	6. Water Use Classification
(1) To obtain water (2) To divert water (3) To store water (4) To alter the flow of water (5) To return a flow of water (6) Other (specify)	(1) Agricultural (2) Conservation (3) Industrial (4) Municipal (5) Power (6) River Engineering (7) Storage (8) Recreational
7. Quantity of Water Involved - (cubic feet per second, gallons per day, acre feet per year)	8. Quality of Returned Water (1) Unaltered (2) Altered (specify)

9. Other properties affected by this Undertaking - describe location and list owners

10. Contractor and Sub-Contractors	Names and Addresses	Functions

11. Time Schedule Proposed	12. Fees		
Start _____	Application	Water Use	Total
Completion _____	$ _____	$ _____	$ _____

Signature / Title / Date

FOR OFFICE USE ONLY

APPLICATION FEE	WATER USE FEE	Application Approved by	Filed in Water Use Register
Amount $ _____ Receipt No. _____ Date _____	Amount $ _____ Receipt No. _____ Date _____	_____ 19 _____	19 _____

CHAPTER 1524

TERRITORIAL LANDS ACT

Territorial Land Use Regulations

REGULATIONS RESPECTING LAND USE OPERATIONS IN THE YUKON TERRITORY AND THE NORTHWEST TERRITORIES

Short Title

1. These Regulations may be cited as the *Territorial Land Use Regulations*.

Interpretation

2. In these Regulations,

"Act" means the *Territorial Lands Act*; (*Loi*)

"Class A Permit" means a permit issued pursuant to section 25; (*permis de catégorie A*)

"Class B Permit" means a permit issued pursuant to section 27; (*permis de catégorie B*)

"crossing" means any bridge, causeway or structure or any embankment, cutting, excavation, land clearing or other works used or intended to be used to enable persons, vehicles or machinery to cross any stream, highway or road; (*passage*)

"district oil and gas conservation engineer" means a conservation engineer appointed pursuant to the *Oil and Gas Production and Conservation Act*; (*ingénieur de district pour la conservation du pétrole et du gaz*)

"Dominion Geodesist" means the Dominion Geodesist and Director of the Geodetic Survey, in the Department of Energy, Mines and Resources; (*géodésien fédéral*)

"Engineer" means, in respect of any provision of these Regulations, the Engineer designated by the Minister pursuant to section 4 for the purposes of that provision; (*ingénieur*)

"geophysical survey" means any investigation carried out on the surface of the ground to determine the nature and structure of the subsurface; (*levé géophysique*)

"inspector" means an inspector designated by the Minister pursuant to section 5; (*inspecteur*)

"land use operation" means any work or undertaking on territorial lands that requires a permit; (*exploitation des terres*)

"letter of clearance" means a letter issued by the Engineer pursuant to section 37; (*lettre d'acquittement*)

"line" means a route used to give surface access to any land for the purpose of carrying out a geophysical, geological or engineering survey; (*ligne de levé*)

"man-day", with respect to the use of a campsite, means the use of that campsite by one person for 24 hours; (*jour-homme*)

CHAPITRE 1524

LOI SUR LES TERRES TERRITORIALES

Règlement sur l'utilisation des terres territoriales

RÈGLEMENT CONCERNANT L'EXPLOITATION DES TERRES DANS LE TERRITOIRE DU YUKON ET LES TERRITOIRES DU NORD-OUEST

Titre abrégé

1. Le présent règlement peut être cité sous le titre: *Règlement sur l'utilisation des terres territoriales*.

Interprétation

2. Dans le présent règlement,

«arpenteur en chef» désigne l'arpenteur en chef selon la définition de la *Loi sur l'arpentage des terres du Canada*; (*Surveyor General*)

«borne-signal» comprend un poteau, un jalon, une jalonnette, un monticule, une fosse, une tranchée, ou tout autre objet, chose ou moyen utilisé pour marquer officiellement la limite d'une terre arpentée ou placée ou établie à des fins topographiques, géodésiques ou cadastrales; (*monument*)

«cours d'eau» comprend un lac, une rivière, un étang, un marais, un marécage, un canal, un ruisseau, un ravin ou un couloir au fond duquel coule de l'eau continûment ou par intermittence; (*stream*)

«date de renvoi de l'équipe» désigne la date à laquelle, de l'avis de l'ingénieur de district pour la conservation du pétrole et du gaz, un puits foré dans le but de découvrir ou de produire du pétrole ou du gaz a été dûment terminé; (*rig release date*)

«détenteur de permis» désigne un détenteur de permis se livrant à une exploitation des terres et toute personne employée à cette fin; (*permittee*)

«exploitation des terres» signifie un travail ou une activité exercée sur des terres territoriales et exigeant un permis; (*land use operation*)

«forage dans le roc» désigne une excavation faite dans un claim minier pour obtenir des renseignements d'ordre géologique; (*rock trenching*)

«géodésien fédéral» désigne le géodésien fédéral et le directeur du Service géodésique du ministère de l'Énergie, des Mines et des Ressources; (*Dominion Geodesist*)

«ingénieur» désigne l'ingénieur nommé par le Ministre selon l'article 4; (*Engineer*)

«ingénieur de district pour la conservation du pétrole et du gaz» désigne un ingénieur de la conservation nommé selon la *Loi sur la production et la conservation du pétrole et du gaz*; (*district oil and gas conservation engineer*)

"Minister" means the Minister of Indian Affairs and Northern Development; (*Ministre*)

"monument" means any post, stake, peg, mound, pit, trench or any other object, thing or device used to officially mark the boundary of any surveyed lands, or placed or established for any topographic, geodetic or cadastral purpose; (*borne-signal*)

"permit" means a Class A Permit or a Class B Permit; (*permis*)

"permittee" means the holder of a permit and includes a person engaged in a land use operation or anyone employed by a permittee to conduct a land use operation; (*détenteur de permis*)

"rig release date" means the date on which, in the opinion of a district oil and gas conservation engineer, a well drilled for the purpose of discovering or producing oil and gas has been properly terminated; (*date de renvoi de l'équipe*)

"rock trenching" means any excavation carried out on a mineral claim for the purpose of obtaining geological information; (*forage dans le roc*)

"spud-in" means the initial penetration of the ground for the purpose of drilling an oil or gas well; (*percée*)

"stream" means any lake, river, pond, swamp, marsh, channel, gully, coulee or draw that continuously or intermittently contains water; (*cours d'eau*)

"Surveyor General" means the Surveyor General as defined in the *Canada Lands Surveys Act*; (*arpenteur en chef*)

"territorial lands" means lands in the Yukon Territory or in the Northwest Territories

(*a*) that are vested in the Crown or of which the Government of Canada has power to dispose, and

(*b*) that are under the control, management and administration of the Minister. (*terres territoriales*)

«inspecteur» désigne un inspecteur nommé par le Ministre selon l'article 5; (*inspector*)

«jour-homme» signifie dans le cas de l'utilisation d'un campement, l'utilisation de ce campement par une personne durant 24 heures; (*man-day*)

«lettre d'acquittement» désigne une lettre délivrée par l'ingénieur selon l'article 37; (*letter of clearance*)

«levé géophysique» signifie une recherche effectuée à la surface du sol pour déterminer la nature et la structure sous-jacentes; (*geophysical survey*)

«ligne de levé» désigne une route d'accès à un terrain, utilisée pour l'exécution de levés géophysiques, géologiques ou de génie civil; (*line*)

«Loi» désigne la *Loi sur les terres territoriales*; (*Act*)

«Ministre» désigne le ministre des Affaires indiennes et du Nord canadien; (*Minister*)

«passage» comprend un pont, une chaussée, une structure, une digue, une tranchée, une excavation, un espace libre ou autres travaux permettant ou destinés à permettre à des personnes, véhicules ou machines de franchir un cours d'eau, un chemin ou une route; (*crossing*)

«percée» signifie la première pénétration du sol pour le forage d'un puits de pétrole ou de gaz; (*spud-in*)

«permis» désigne un permis de catégorie A ou B; (*permit*)

«permis de catégorie A» désigne un permis délivré selon l'article 25; (*Class A Permit*)

«permis de catégorie B» désigne un permis délivré selon l'article 27; (*Class B Permit*)

«terres territoriales» désigne les terres comprises dans les territoires du Nord-Ouest ou dans le territoire du Yukon

a) dévolues à la Couronne ou dont le gouvernement du Canada a le pouvoir de disposer, et

b) dont le Ministre a le contrôle, la gérance et l'administration. (*territorial lands*)

Establishment of Land Management Zones

3. The Yukon Territory and the Northwest Territories are hereby set apart and appropriated as land management zones.

Constitution de zones de gestion des terres

3. Le territoire du Yukon et les territoires du Nord-Ouest sont mis à part et affectés à titre de zones de gestion des terres.

Designation of the Engineer

4. The Minister may designate any officer of the Department of Indian Affairs and Northern Development as Engineer for the purposes of any provision of these Regulations.

Nomination de l'ingénieur

4. Le Ministre peut désigner un fonctionnaire du ministère des Affaires indiennes et du Nord canadien pour agir comme ingénieur aux fins du présent règlement.

Designation of Inspectors

5. The Minister may designate any person as an inspector for the purposes of these Regulations.

Nomination des inspecteurs

5. Le Ministre peut désigner toute personne pour agir comme inspecteur aux fins du présent règlement.

Exemption from Regulations

6. These Regulations do not apply to

(*a*) anything done by a resident of the Yukon Territory or the Northwest Territories in the normal course of hunting, fishing or trapping;

(*b*) anything done in the course of prospecting, staking or locating a mineral claim unless it requires a use of equipment or material that normally requires a permit;

Portée du règlement

6. Le présent règlement ne s'applique pas

a) aux activités de chasse, de pêche et de trappe exercées par un résident du territoire du Yukon ou des territoires du Nord-Ouest;

b) aux activités de prospection, de jalonnage ou de localisation d'un claim minier, à moins qu'elles ne requièrent l'utilisation d'équipement ou de matériaux nécessitant un permis;

(*c*) lands whose surface rights have all been disposed of by the Minister; or

(*d*) a timber operation conducted pursuant to section 8 of the *Territorial Timber Regulations*.

7. No person shall engage in a land use operation except in accordance with these Regulations and the *Northern Inland Waters Act* and regulations made thereunder.

Prohibitions

8. No person shall, without a Class A Permit, carry on any work or undertaking on territorial lands that involves

(*a*) the use, in any 30-day period, of more than 150 kg of explosives;

(*b*) the use, except on a public road or trail maintained wholly or in part by federal funds, of any vehicle that exceeds 10 t net vehicle weight;

(*c*) the use of any power driven machinery for earth drilling purposes whose operating weight, excluding the weight of drill rods or stems, bits, pumps and other ancillary equipment, exceeds 2.5 t;

(*d*) the establishment of any campsite that is to be used for more than 400 man-days;

(*e*) the establishment of any petroleum fuel storage facility exceeding 80 000 *l* capacity or the use of a single container for the storage of petroleum fuel that has a capacity exceeding 4 000 *l*;

(*f*) the use of any self-propelled power driven machine for moving earth or clearing land of vegetation;

(*g*) the use of any stationary power driven machine for hydraulic prospecting, moving earth or clearing land, other than a power saw; or

(*h*) the levelling, grading, clearing, cutting or snowploughing of any line, trail or right-of-way exceeding 1.5 m in width and exceeding 4 ha in area.

9. No person shall, without a Class B Permit, carry on any work or undertaking on territorial lands that involves

(*a*) the use, in any 30-day period, of more than 50 kg but less than 150 kg of explosives;

(*b*) the use, except on a public road or trail maintained wholly or in part by federal funds, of any vehicle that is more than 5 t but less than 10 t net vehicle weight, or the use of any vehicle of any weight that exerts pressure on the ground in excess of 35 k pa;

(*c*) the use of any power driven machinery for earth drilling purposes whose operating weight, excluding the weight of drill rods or stems and bits, pumps and other ancillary equipment, is more than 500 kg but less than 2.5 t;

(*d*) the establishment of any campsite that is to be used by more than two people for more than 100 but less than 400 man-days;

(*e*) the establishment of any petroleum fuel storage facility that has a capacity of more than 4 000 *l* but less than 80 000 *l* or the use of a single container for the storage of

c) aux terres dont tous les droits de surface ont été cédés par le Ministre; ni

d) aux travaux de coupe de bois entrepris selon l'article 8 du *Règlement sur le bois des territoires*.

7. Nul ne peut entreprendre l'exploitation des terres à moins de se conformer au présent règlement, à la *Loi sur les eaux intérieures du Nord* et au règlement établi selon cette loi.

Interdictions

8. Nul ne peut, sans un permis de catégorie A, entreprendre, sur des terres territoriales, un travail ou une activité impliquant

a) l'utilisation, au cours d'une période de 30 jours, de plus de 150 kg d'explosifs;

b) l'utilisation, sauf sur une voie publique ou un sentier entretenu en totalité ou en partie à même les deniers publics, d'un véhicule de plus de 10 tonnes;

c) l'utilisation d'une machine motorisée de forage dont le poids durant les travaux est supérieur à 2.5 t, non compris le poids des tiges de forage ou des maîtresses-tiges, des trépans, des pompes et autres accessoires;

d) l'installation d'un campement destiné à l'utilisation pour plus de 400 jours-hommes;

e) aux fins d'entreposage du combustible, la création d'installations ayant une capacité supérieure à 80 000 litres ou l'utilisation d'un seul réservoir ayant une capacité supérieure à 4 000 litres;

f) l'utilisation, pour le terrassement et l'essartage, d'une machine motorisée autoguidée;

g) l'utilisation, pour la prospection hydraulique, le terrassement et l'essartage, d'une machine fixe motorisée, autre qu'une scie mécanique; ou

h) le nivelage, le terrassement, l'essartage, l'excavation ou le déblaiement de neige d'une ligne de levé, d'un sentier ou d'une servitude de passage d'une largeur de plus 1,5 mètre et d'une superficie de plus de 4 hectares.

9. Nul ne peut, sans un permis de catégorie B, entreprendre, sur des terres territoriales, un travail ou une activité impliquant

a) l'utilisation, au cours d'une période de 30 jours, de plus de 50 kg d'explosifs, sans dépasser 150 kg;

b) l'utilisation, sauf sur une voie publique ou un sentier entretenu en totalité ou en partie à même les deniers publics, d'un véhicule de plus de 5 t mais de moins de 10 t ou l'utilisation d'un véhicule, exerçant sur le sol une pression supérieure à 35 k pa;

c) l'utilisation d'une machine motorisée de forage dont le poids durant les travaux est supérieur à 500 kg, mais inférieur à 2.5 t, non compris le poids des tiges de forage ou des maîtresses-tiges, des trépans, des pompes et autres accessoires;

d) l'installation d'un campement destiné à l'utilisation de plus de deux personnes pour plus de 100 mais moins de 400 jours-hommes;

petroleum fuel that has a capacity of more than 2 000 *l* but less than 4 000 *l*; or

(*f*) the levelling, grading, clearing, cutting or snowploughing of any line, trail or right-of-way exceeding 1.5 m in width but not exceeding 4 ha in area.

10. No permittee shall, unless expressly authorized in his permit or expressly authorized in writing by an inspector

(*a*) conduct a land use operation within 30 m of a known monument or a known or suspected archaeological site or burial ground;

(*b*) when excavating territorial land within 100 m of any stream, excavate at a point that is below the normal high water mark of that stream;

(*c*) deposit on the bed of any stream any excavated material; or

(*d*) when placing a fuel or supply cache within 100 m of any stream, place the fuel or supply cache below the normal high water mark of that stream.

Small Fuel Caches

11. Every person who establishes a fuel cache of more than 400 *l* and less than 4 000 *l* on territorial land for which a permit is not required shall, within 30 days of the establishment thereof, notify the Engineer in writing, giving details of the cache including the amount and type of fuel, size of containers and method of storage and proposed date of removal of the cache.

Excavation

12. Subject to the terms and conditions of his permit or the express written authority of an inspector, every permittee shall replace all materials removed by him in the course of excavating, other than rock trenching, and shall level and compact the area of the excavation.

Water Crossings

13. (1) Subject to the terms and conditions of his permit or the express written authority of an inspector, every permittee shall

(*a*) remove any material or debris deposited in any stream in the course of a land use operation, whether for the purpose of constructing a crossing or otherwise, and

(*b*) restore the channel and bed of the stream to their original alignment and cross-section,

prior to the completion of the land use operation or prior to the commencement of spring break-up, whichever occurs first.

(2) Subsection (1) shall not be deemed to permit any person to deposit any material or debris in a stream contrary to the *Northern Inland Waters Act* or the *Fisheries Act* or any regulations made under those Acts.

e) aux fins d'entreposage du combustible, la création d'installations ayant une capacité supérieur à 4 000 litres, mais inférieure à 80 000 litres ou l'utilisation d'un seul réservoir ayant une capacité supérieure à 2 000 litres, mais inférieure à 4 000; ou

f) le nivelage, le terrassement, l'essartage, l'excavation ou le déblaiement de neige d'une ligne de levé, d'un sentier ou d'une servitude de passage d'une largeur de plus de 1,5 mètre et d'une superficie n'excédant pas 4 hectares.

10. Un détenteur de permis ne peut, sauf autorisation explicite du permis ou autorisation explicite écrite d'un inspecteur,

a) conduire une exploitation des terres à moins de 30 mètres d'une borne-signal connue, ou d'un gisement archéologique ou cimetière connu ou supposé;

b) de faire, à moins de 100 mètres d'un cours d'eau, sur des terres territoriales, des travaux d'excavation au-dessous du niveau normal de ses hautes eaux;

c) de déverser des déblais dans le lit d'un cours d'eau; ou

d) de déposer du combustible ou des fournitures dans une cache au-dessous du niveau normal des hautes eaux d'un cours d'eau lorsque la cache est à moins de 100 mètres de ce cours d'eau.

Cache de combustible de faible capacité

11. Une personne qui installe, sur des terres territoriales, une cache de combustible, dont la capacité est supérieure à 400 litres, mais inférieure à 4 000 litres et pour laquelle un permis n'est pas exigé en avise par écrit l'ingénieur dans les 30 jours, lui donnant les détails de la cache, y compris la quantité et le genre de combustible, la taille des réservoirs, la méthode d'entreposage et la date prévue de l'enlèvement de la cache.

Excavation

12. Sous réserve de son permis ou de l'autorisation explicite écrite d'un inspecteur, un détenteur de permis procédant à une excavation qui n'est pas un forage dans le roc comble l'excavation avec les déblais qu'il veille à niveler et tasser.

Passages d'eau

13. (1) Sous réserve de son permis ou de l'autorisation explicite écrite d'un inspecteur, un détenteur de permis

a) enlève les matériaux ou débris déposés dans un cours d'eau lors de l'exploitation des terres, que ce soit pour la construction d'un passage ou autre, et

b) remet le lit du cours d'eau dans son alignement et sa coupe transversale d'origine,

avant l'achèvement de l'exploitation des terres ou avant le début de la débâcle printanière, selon le premier événement.

(2) Le paragraphe (1) n'est pas réputé autoriser quiconque à déposer des matériaux ou débris dans un cours d'eau, en contravention de la *Loi sur les eaux intérieures du Nord*, de la *Loi sur les pêcheries* ou de leurs règlements respectifs.

Clearing of Lines, Trails or Rights-of-Way

14. (1) Unless expressly authorized in a permit, no permittee shall

(*a*) clear a new line, trail or right-of-way where there is an existing line, trail or right-of-way that he can use;

(*b*) clear a line, trail or right-of-way wider than 10 m; or

(*c*) while clearing a line, trail or right-of-way, leave leaners or debris in standing timber.

(2) Where, in the opinion of an inspector, serious erosion may result from a land use operation, the permittee shall adopt such measures to control erosion as may be required by the inspector.

Monuments

15. (1) Where a boundary monument is damaged, destroyed, moved or altered in the course of a land use operation, the permittee shall

(*a*) report the fact immediately to the Surveyor General and pay to the Surveyor General the costs of

(i) investigating such damage, destruction, movement or alteration, and

(ii) restoring or re-establishing the monument to its original condition or its original place; or

(*b*) with the prior written consent of the Surveyor General, cause the monument to be restored or re-established at his own expense.

(2) Where a topographic or geodetic monument is damaged, destroyed or altered in the course of a land use operation, the permittee shall

(*a*) report the fact immediately to the Dominion Geodesist, and pay to the Dominion Geodesist the costs described in subparagraphs (1)(*a*)(i) and (ii); or

(*b*) with the prior written consent of the Dominion Geodesist, cause the monument to be restored or re-established at his own expense.

(3) The restoration or re-establishment of a monument pursuant to subsection (1) or (2) shall be carried out in accordance with instructions from the Surveyor General or Dominion Geodesist, as the case may be.

Archaeological Sites

16. Where, in the course of a land use operation, a suspected archaeological site or burial ground is unearthed or otherwise discovered, the permittee shall immediately

(*a*) suspend the land use operation on the site; and

(*b*) notify the Engineer or an inspector of the location of the site and the nature of any unearthed materials, structures or artifacts.

Campsites

17. (1) Subject to the terms and conditions of his permit, every permittee shall dispose of all garbage, waste and debris

Essartage de lignes de levé, de sentiers et de servitudes de passage

14. (1) Un détenteur de permis ne peut, sauf autorisation explicite de son permis,

a) essarter une ligne de levé, un sentier ou une servitude de passage, s'il en est de praticables;

b) essarter une ligne de levé, un sentier ou une servitude de passage d'une largeur supérieure à 10 mètres; ou

c) laisser, lors de l'essartage d'une ligne de levé, d'un sentier ou d'une servitude de passage, des débris ou des arbres inclinés parmi du bois sur pied.

(2) Lorsqu'un inspecteur est d'avis que l'exploitation des terres pourrait causer une grave érosion, il peut imposer au détenteur de permis les mesures adéquates pour l'éviter.

Bornes-signaux

15. (1) Le détenteur de permis qui, au cours de l'exploitation des terres, endommage, détruit, déplace ou modifie une borne-signal de limite

a) en informe immédiatement l'arpenteur en chef et lui paie les frais

(i) d'enquête sur les dommages, la destruction, le déplacement ou la modification, et

(ii) de remise de la borne-signal dans son état ou à son lieu d'origine; ou

b) fait remettre, à ses frais et avec le consentement préalable et écrit de l'arpenteur en chef, la borne-signal dans son état ou à son lieu d'origine.

(2) Le détenteur de permis qui, au cours de l'exploitation des terres, endommage, détruit, déplace ou modifie une borne-signal topographique ou géodésique

a) en informe immédiatement le géodésien fédéral et lui paie les frais visés aux sous-alinéas (1)*a*)(i) et (ii); ou

b) fait remettre, à ses frais et avec le consentement préalable et écrit du géodésien fédéral, la borne-signal dans son état ou à son lieu d'origine.

(3) La remise en état ou en place d'une borne-signal selon les paragraphes (1) et (2) est exécutée selon les directives de l'arpenteur en chef ou du géodésien fédéral, selon le cas.

Gisements archéologiques

16. Dès que, au cours d'une exploitation des terres, est soupçonnée l'exhumation ou la découverte d'un gisement archéologique ou d'un cimetière, le détenteur de permis

a) cesse l'exploitation des terres à cet endroit; et

b) avise l'ingénieur ou un inspecteur de l'emplacement du gisement et de la nature des matériaux, constructions ou objets exhumés.

Campements

17. (1) Sous réserve de son permis, un détenteur de permis qui a utilisé un campement pour une exploitation des terres,

from any campsite used in connection with a land use operation by removal, burning or burial or by such other method as may be directed by an inspector.

(2) Sanitary sewage produced in connection with land use operations shall be disposed of in accordance with the *Public Health Ordinance* of the Northwest Territories or the *Public Health Ordinance* of the Yukon Territory, whichever is applicable, and any regulations made under the applicable Ordinance.

Restoration of Permit Area

18. Subject to the terms and conditions of his permit, every permittee shall, after completion of a land use operation, restore the permit area as nearly as possible to the same condition as it was prior to the commencement of the land use operation.

Removal of Buildings and Equipment

19. (1) Subject to subsections (2) and (3), every permittee shall, on completion of a land use operation, remove all buildings, machinery, equipment, materials and fuel drums or other storage containers used in connection with the land use operation.

(2) A permittee may, with the prior written approval of the Engineer, leave on territorial lands such buildings, equipment machinery and materials as the permittee deems may be required for future land use operations or other operations in the area, but any equipment, machinery or materials so left shall be stored in a manner, at a location and for a duration approved by the Engineer.

(3) Subject to any applicable mining legislation, a permittee may, without the prior approval of the Engineer, leave diamond drill cores at a drill site on territorial lands.

Emergencies

20. Any person may, in an emergency that threatens life, property or natural environment, carry out such operation as he deems necessary to cope with the emergency, whether or not the operation is carried out in accordance with these Regulations or any permit that he may have and such person shall immediately thereafter send a written report to the Engineer describing the duration, nature and extent of the operation.

Eligibility for a Permit

21. In order to be eligible for a permit, a person shall

(*a*) where a right to search for, win or exploit minerals or natural resources is to be exercised by the carrying out of the land use operation authorized by the permit, be

(i) the holder of that right,

(ii) the manager of operations, where there is more than one holder of that right and such holders have entered into an exploration or operating agreement designating one of them as manager of operations, or

(iii) the person who contracts to have the land use operations carried out, where there is more than one holder of

fait disparaître tous les déchets, rebuts et débris en les enlevant, en les brûlant, en les enterrant ou selon la méthode que peut imposer l'inspecteur.

(2) Les eaux-vannes résultant de l'exploitation des terres sont évacuées selon l'*Ordonnance concernant l'hygiène publique des territoires du Nord-Ouest* ou l'*Ordonnance concernant l'hygiène publique du territoire du Yukon* et leurs règlements respectifs.

Remise en état de la zone visée par un permis

18. A la fin de l'exploitation des terres et sous réserve de son permis, un détenteur de permis remet autant que possible la zone concernée dans son état initial.

Enlèvement des bâtiments et de l'équipement

19. (1) Sous réserve des paragraphes (2) et (3), un détenteur de permis enlève, à la fin de l'exploitation des terres, les bâtiments, la machinerie, les matériaux et les barils de combustible ou autres réservoirs d'entreposage utilisés pour l'exploitation.

(2) Un détenteur de permis peut, avec l'autorisation écrite et préalable de l'ingénieur, laisser sur des terres territoriales, les bâtiments, l'équipement, la machinerie et les matériaux qu'il juge indispensables pour une exploitation ultérieure des terres de la zone; dès lors, l'équipement, la machinerie et les matériaux ainsi laissés sont entreposés de la façon, à l'endroit et pour la durée qu'impose l'ingénieur.

(3) Sous réserve de toute législation minière applicable, un détenteur de permis peut laisser, sans l'approbation préalable de l'ingénieur, les carottes de foreuse à diamants dans une zone de forage des terres territoriales.

Urgences

20. Une personne peut, lors d'une urgence qui menace la vie, les biens ou l'environnement naturel, prendre les mesures qu'elle juge indispensables pour y faire face, que ces mesures soient conformes ou non à ce règlement ou au permis qu'elle détient et elle expédie sans délai à l'ingénieur un rapport écrit précisant la durée, la nature et l'étendue des mesures prises.

Éligibilité

21. Pour être éligible à un permis, une personne doit être

a) lorsque l'exploitation des terres autorisée par le permis a pour objet le droit de prospection, d'extraction ou d'exploitation des minéraux ou des ressources naturelles,

(i) le titulaire de ce droit,

(ii) s'il existe plusieurs titulaires et qu'ils ont conclu une convention d'exploration ou d'exploitation désignant l'un d'eux comme directeur des travaux, ce directeur, ou

(iii) s'il existe plusieurs titulaires et qu'ils n'ont pas conclu une telle convention, celui qui s'engage à faire exécuter l'exploitation des terres;

that right and they have not entered into an exploration or operating agreement designating one of them as manager of operations;

(*b*) where no right to search for, win or exploit minerals or natural resources is to be exercised by the carrying out of the land use operation authorized by the permit, be the person who contracts to have the land use operation carried out; or

(*c*) in any case not provided for in paragraph (*a*) or (*b*), be the person who is to carry out the land use operation.

b) lorsque l'exploitation des terres autorisée par le permis n'a pas pour objet le droit de prospection, d'extraction ou d'exploitation des minéraux ou des ressources naturelles, celui qui s'engage à faire exécuter l'exploitation des terres, ou

c) dans tous les autres cas, celui qui doit exécuter l'exploitation des terres.

Application for a Permit

22. (1) Any person who, in accordance with section 21, is eligible for a permit may submit to the Engineer, in duplicate, an application for a permit in a form approved by the Minister.

(2) Every application submitted pursuant to subsection (1) shall be accompanied by the applicable application fee and land use fee, if any, set out in the schedule and a preliminary plan showing

(*a*) the lands proposed to be used and an estimate of their area; and

(*b*) the approximate location of all

(i) existing lines, trails, rights-of-way and cleared areas proposed to be used in the land use operation,

(ii) new lines, trails, rights-of-way and cleared areas proposed to be used in the land use operation,

(iii) buildings, campsites, air landing strips, air navigation aids, fuel and supply storage sites, waste disposal sites, excavations and other works and places proposed to be constructed or used during the land use operation, and

(iv) bridges, dams, ditches, railroads, highways and roads, transmission lines, pipelines, survey lines and monuments, air landing strips, streams and all other features, structures or works that, in the opinion of the applicant, may be affected by the land use operation.

(3) For the purpose of calculating the land use fee payable where territorial lands are proposed to be used for a line, trail or right-of-way, the width of the line, trail or right-of-way shall, unless otherwise specified by the Engineer in the permit, be deemed to be 10 m.

23. (1) The Engineer may, before issuing a permit,

(*a*) order an inspection of the lands proposed to be used thereunder; and

(*b*) require an applicant for a permit to provide him with such information and data concerning the proposed use of the lands and the physical and biological characteristics thereof as will enable the Engineer to evaluate any quantitative and qualitative effects of the proposed land use operation.

Demande de permis

22. (1) Une personne éligible à un permis selon l'article 21 peut présenter, en double exemplaire, à l'ingénieur une demande de permis en la forme approuvée par le Ministre.

(2) La demande de permis présentée selon le paragraphe (1) est accompagnée du droit applicable à la demande et, s'il y a lieu, du droit d'utilisation des terres visé à l'annexe, ainsi que d'un plan provisoire indiquant

a) les terres que le requérant se propose d'utiliser et leur superficie estimative; et

b) l'emplacement approximatif

(i) des lignes de levé, sentiers, servitudes de passage et zones essartées en existence que le requérant se propose d'utiliser lors de l'exploitation des terres,

(ii) des nouvelles lignes de levé, nouveaux sentiers, nouvelles servitudes de passage et nouvelles zones essartées que le requérant se propose d'utiliser lors de l'exploitation des terres,

(iii) des bâtiments, campements, pistes d'atterrissage, aides à la navigation aérienne, endroits d'entreposage des combustibles et fournitures, dépotoirs, excavations et autres travaux et endroits que le requérant se propose d'aménager ou d'utiliser lors de l'exploitation des terres, et

(iv) des ponts, barrages, fossés, voies ferrées, routes, chemins, lignes de transmission, pipe-lines, lignes de levé et bornes-signaux, pistes d'atterrissage, cours d'eau et autres éléments, structures ou travaux pouvant, de l'avis du requérant, être affectés par l'exploitation des terres.

(3) La largeur des lignes de levé, des sentiers ou des servitudes de passage qui doivent être aménagés à même des terres territoriales est, aux fins du calcul du droit d'utilisation et sauf avis contraire de l'ingénieur dans le permis, censée être de 10 mètres.

23. (1) Avant de délivrer un permis, l'ingénieur peut

a) ordonner une inspection des terres que le requérant se propose d'utiliser; et

b) exiger du requérant qu'il lui fournisse des renseignements et des données sur l'utilisation projetée de terres et sur leurs caractéristiques physiques et biologiques, de façon à lui permettre de prédire les effets qualitatifs et quantitatifs de leur exploitation.

(2) Where an inspector makes an inspection pursuant to an order of the Engineer under paragraph (1)(*a*), he shall investigate and report to the Engineer particulars of

(*a*) the existing biological and physical characteristics of the lands proposed to be used and the surrounding lands;

(*b*) any disturbance that the proposed land use operation may cause on the lands proposed to be used and the surrounding lands and the biological characteristics thereof; and

(*c*) the manner in which the disturbance referred to in paragraph (*b*) may be minimized and controlled.

(3) The Engineer may, where he deems it necessary or when requested to do so by an applicant, inform the applicant of the nature of an inspector's report referred to in subsection (2).

24. Where the Engineer receives an application for a Class A Permit that is not made in accordance with these Regulations, he shall, within 10 days thereafter, notify the applicant in writing that his application cannot be accepted and give the reasons therefor.

25. (1) The Engineer shall, within 10 days after receipt of an application for a Class A Permit made in accordance with these Regulations,

(*a*) issue a Class A Permit subject to any terms and conditions he may include therein pursuant to subsection 31(1);

(*b*) notify the applicant that further time is required to issue a permit and give the reasons therefor;

(*c*) notify the applicant in writing that he has ordered further studies or investigations to be made respecting the lands proposed to be used and state the reasons therefor; or

(*d*) refuse to issue a permit and notify the applicant in writing of his refusal and the reasons therefor.

(2) Where the Engineer has notified an applicant that further time is required to issue a permit pursuant to paragraph (1)(*b*), he shall, within 42 days after the date of receipt of the application, comply with paragraph (1)(*a*), (*c*) or (*d*).

(3) Where the Engineer has notified an applicant that he has ordered further studies or investigations to be made pursuant to paragraph (1)(*c*), he shall, within 12 months after the date of receipt of the application, comply with paragraph (1)(*a*) or (*d*).

26. Where the Engineer receives an application for a Class B Permit that is not made in accordance with these Regulations, he shall, within 3 days thereafter, notify the applicant in writing that his application cannot be accepted and give the reasons therefor.

27. The Engineer shall, within 10 days after receipt of an application for a Class B Permit made in accordance with these Regulations,

(*a*) issue a Class B Permit subject to any terms and conditions he may include therein pursuant to subsection 31(1); or

(*b*) refuse to issue a permit and notify the applicant in writing of his refusal and the reasons therefor.

(2) L'inspecteur qui fait une inspection sur ordre de l'ingénieur selon l'alinéa (1)*a*) informe celui-ci des résultats de son enquête sur

a) les caractéristiques physiques et biologiques existantes des terres dont l'utilisation est projetée et des terres adjacentes;

b) la perturbation que l'exploitation envisagée des terres peut causer à ces terres et aux terres adjacentes, ainsi que les caractéristiques biologiques de cette perturbation; et

c) la façon dont la perturbation peut être réduite et contrôlée.

(3) L'ingénieur peut, lorsqu'il le juge nécessaire ou à la demande du requérant, aviser celui-ci du contenu du rapport de l'inspecteur visé au paragraphe (2).

24. Dans les 10 jours de la réception d'une demande de permis de catégorie A non conforme au présent règlement, l'ingénieur donne au requérant un avis écrit et motivé du rejet de sa demande.

25. (1) Dans les 10 jours de la réception d'une demande de permis de catégorie A conforme à ce règlement, l'ingénieur

a) délivre le permis sous réserve des conditions qu'il peut y énoncer, selon le paragraphe 31(1);

b) donne au requérant un avis motivé du délai supplémentaire requis pour sa délivrance;

c) donne au requérant un avis écrit et motivé à l'effet qu'il a ordonné des études ou enquêtes supplémentaires sur les terres dont l'utilisation est envisagée; ou

d) donne au requérant un avis écrit et motivé du rejet de la demande de permis.

(2) Lorsque l'ingénieur a, selon l'alinéa (1)*b*), avisé le requérant du délai supplémentaire requis pour la délivrance du permis, il se conforme aux alinéas 1(*a*), *c*) ou *d*), dans les 42 jours de la réception de la demande.

(3) Lorsque l'ingénieur a, selon l'alinéa (1)*c*), avisé le requérant qu'il a ordonné des études ou enquêtes supplémentaires, il se conforme aux alinéas (1)*a*) ou *d*), dans les 12 mois de la réception de la demande.

26. Dans les 3 jours de la réception d'une demande de permis de catégorie B non conforme au présent règlement, l'ingénieur donne au requérant un avis écrit et motivé du rejet de sa demande.

27. Dans les 10 jours de la réception d'une demande de permis de catégorie B conforme au présent règlement, l'ingénieur

a) délivre le permis sous réserve des conditions qu'il peut y énoncer, selon le paragraphe 31(1); ou

b) donne au requérant un avis écrit et motivé du rejet de la demande de permis.

28. The Engineer may, where he deems it necessary, notify an applicant in writing that his application for a Class B Permit will be considered as an application for a Class A Permit.

29. The Engineer shall assign a number to each permit.

Display of Permit

30. Every permittee engaged in a work or an undertaking authorized by a permit shall display

(*a*) an exact copy of the permit, including the conditions thereof, in such manner and at such places as the Engineer may require; and

(*b*) the number assigned to the permit on such articles and equipment, in such manner and at such places as the Engineer may require.

Terms and Conditions of Permits

31. (1) The Engineer may include in any permit terms and conditions respecting

(*a*) the location and the area of territorial lands that may be used;

(*b*) the times at which any work or undertaking may be carried on;

(*c*) the type and size of equipment that may be used in the land use operation;

(*d*) the methods and techniques to be employed by the permittee in carrying out the land use operation;

(*e*) the type, location, capacity and operation of all facilities to be used by the permittee in the land use operation;

(*f*) the methods of controlling or preventing ponding of water, flooding, erosion, slides and subsidences of land;

(*g*) the use, storage, handling and ultimate disposal of any chemical or toxic material to be used in the land use operation;

(*h*) the protection of wildlife and fisheries habitat;

(*i*) the protection of objects and places of recreational, scenic and ecological value;

(*j*) the deposit of security in accordance with section 36;

(*k*) the establishment of petroleum fuel storage facilities;

(*l*) the methods and techniques for debris and brush disposal; and

(*m*) such other matters not inconsistent with these Regulations as the Engineer thinks necessary for the protection of the biological or physical characteristics of the land management zone.

(2) The Engineer may modify any of the terms or conditions included in a permit on receipt of a written request from the permittee that sets out

(*a*) the terms or conditions in the permit that the permittee wishes modified; and

(*b*) the nature of the modification proposed and the reasons therefor.

28. L'ingénieur peut, lorsqu'il le juge nécessaire, aviser le requérant par écrit que sa demande de permis de catégorie B sera considérée comme une demande de permis de catégorie A.

29. L'ingénieur attribue un numéro à chaque permis.

Affichage du permis

30. Un détenteur de permis effectuant un travail ou une activité autorisée par le permis affiche

a) une copie conforme du permis et de ses conditions, de la façon et aux endroits prescrits par l'ingénieur; et

b) le numéro du permis sur les articles et l'équipement, de la façon et aux endroits prescrits par l'ingénieur.

Conditions des permis

31. (1) L'ingénieur peut énoncer dans un permis des conditions concernant

a) l'emplacement et la superficie des terres territoriales pouvant être utilisées;

b) les périodes au cours desquelles un travail ou une activité peut être exécutée;

c) le genre et la taille de l'équipement pouvant être employé lors de l'exploitation des terres;

d) les méthodes et techniques que doit employer le détenteur de permis lors de l'exploitation des terres;

e) le genre, l'emplacement, la capacité et le fonctionnement de toutes les installations que doit utiliser le détenteur de permis lors de l'exploitation des terres;

f) les mesures préventives contre l'accumulation d'eau, l'inondation, l'érosion, les glissements et les affaissements de terrain;

g) l'emploi, l'entreposage, la manipulation et l'élimination des matières chimiques ou toxiques, qui doivent être utilisées au cours de l'exploitation des terres;

h) la protection de la faune terrestre et aquatique;

i) la protection des objets et lieux qui ont une valeur récréative, panoramique et écologique;

j) le dépôt d'une garantie selon l'article 36;

k) la mise sur pied d'installations pour l'entreposage du combustible;

l) les méthodes et techniques pour disposer des débris et broussailles; et

m) d'autres matières, compatibles avec le présent règlement, que l'ingénieur juge nécessaires à la protection des caractéristiques physiques et biologiques de la zone de gestion des terres.

(2) L'ingénieur peut modifier les conditions d'un permis sur réception d'une demande écrite du détenteur, énonçant

a) les conditions du permis que le détenteur désire faire modifier; et

b) la nature et le motif du changement proposé.

(3) Where the Engineer receives a written request from a permittee pursuant to subsection (2), he shall notify the permittee of his decision and the reasons therefor within 10 days of receipt of the request.

(4) Every permit shall set out the period for which it is valid and such period shall be based on the estimated dates of commencement and completion as set out by the permittee in his application, but in no case shall a permit be valid for a period exceeding two years.

(5) On receipt of a written request from a permittee for an extension of the duration of his permit, the Engineer may extend the duration of the permit subject to such conditions not inconsistent with these Regulations as he thinks fit, for such period, not exceeding one year, as he thinks necessary to enable the permittee to complete the land use operation authorized by the permit.

(3) Dans les 10 jours de la réception de la demande visée au paragraphe (2), l'ingénieur donne au détenteur de permis un avis motivé de sa décision.

(4) Le permis indique sa période de validité n'excédant pas deux ans et fixée d'après les dates prévues dans la demande de permis pour le commencement et la fin des travaux.

(5) Sur réception d'une demande écrite d'un détenteur de permis pour la prolongation de la durée de validité de son permis, l'ingénieur peut, sous réserve des conditions qu'il juge à propos et non incompatibles avec le présent règlement, accorder la prolongation, n'excédant pas un an, qu'il juge nécessaire à l'achèvement de l'exploitation des terres autorisée par le permis.

Reports

32. Every permittee shall submit to the inspector or Engineer, in a form and on a date satisfactory to the inspector or Engineer, such reports as are requested by the inspector or Engineer, in order to ascertain the progress of the land use operation.

Rapports

32. Le détenteur de permis présente à l'inspecteur ou à l'ingénieur, dans la forme et aux dates qu'ils jugent satisfaisantes, les rapports qu'ils demandent afin de s'enquérir de l'avancement de l'exploitation des terres.

Final Plan

33. (1) Every permittee shall, within 60 days after the completion of a land use operation or the expiry of his permit, whichever occurs first, submit a final plan in duplicate to the Engineer showing

(*a*) the lands actually subjected to the land use operation;

(*b*) the location of

(i) lines, trails, rights-of-way and cleared areas that were used by the permittee during the land use operation, specifying those that were cleared by the permittee and those that existed before the land use operation began,

(ii) buildings, campsites, air landing strips, air navigation aids, fuel and supply storage sites, waste disposal sites, excavations and other works and places that were constructed or used by the permittee during the land use operation, and

(iii) bridges, dams, ditches, railroads, highways and roads, transmission lines, pipelines, survey lines and monuments, air landing strips, streams and all other features, structures or works that were affected by the land use operation; and

(*c*) the calculations of the area of territorial lands used in the operation.

(2) The final plan submitted to the Engineer pursuant to subsection (1) shall be

(*a*) certified by the permittee or his agent authorized for the purpose as to the accuracy of

(i) locations, distances and areas, and

(ii) the representation of the land use operation; or

Plan définitif

33. (1) Dans les 60 jours de l'achèvement de l'exploitation des terres ou de la date d'expiration de son permis, selon la première éventualité, le détenteur de permis présente à l'ingénieur un plan définitif, en double exemplaire, indiquant

a) les terres effectivement sujettes à l'exploitation;

b) l'emplacement

(i) des lignes de levé, sentiers, servitudes de passage et zones essartées que le détenteur a utilisés au cours de l'exploitation des terres, en précisant ceux qu'il a lui-même essartés et ceux qui existaient déjà au début de l'exploitation,

(ii) des bâtiments, campements, pistes d'atterrissage, aides à la navigation aérienne, endroits d'entreposage des combustibles et des fournitures, dépotoirs, excavations et autres travaux ou endroits que le détenteur a utilisés ou aménagés au cours de l'exploitation des terres, et

(iii) des ponts, barrages, fossés, voies ferrées, routes, chemins, lignes de transmission, pipe-lines, lignes de levé et bornes-signaux, pistes d'atterrissage, cours d'eau et autres éléments, structures ou travaux affectés par l'exploitation des terres; et

c) les calculs de la superficie des terres territoriales utilisées dans l'exploitation.

(2) Le plan définitif présenté à l'ingénieur selon le paragraphe (1) est

a) certifié par le détenteur du permis ou son mandataire autorisé à cette fin, quant à l'exactitude

(i) des emplacements, distances et superficies, et

(ii) de la description de l'exploitation des terres; ou

(*b*) drawn from and accompanied by positive prints of vertical aerial photographs or aerial photomosaics showing the lands subjected to the land use operation.

(3) On receipt of a written request from a permittee for an extension of the time for filing a final plan, the Engineer may extend the time for filing the final plan by not more than 60 days.

(4) The Engineer shall reject the final plan if it does not comply with this section and section 35 and the permittee shall, within three weeks after receipt of written notice from the Engineer of rejection of the plan, submit to the Engineer another final plan that complies with this section and section 35.

(5) Notwithstanding the expiry of a permit or the submission of a final plan, every permittee remains responsible for his obligations arising under the terms and conditions of the permit or under these Regulations until such time as the Engineer issues a letter of clearance for the land use operation.

Determination of Land Use Fee

34. (1) Within 30 days after the Engineer has issued a letter of clearance, the permittee shall calculate the land use fee payable based on the actual area of land used in the operation and the Engineer shall,

(*a*) where the land use fee submitted with the application is greater than the fee so calculated, refund the excess to the permittee; or

(*b*) where the land use fee submitted with the application is less than the fee so calculated, demand, by notice in writing to the permittee, payment of the deficiency.

(2) Where an application for a permit is refused, the land use fee submitted with the application shall be refunded to the applicant.

(3) No application fee shall be refunded.

Land Division and Plans

35. Every preliminary plan or final plan submitted under these Regulations shall

(*a*) be drawn to a scale that clearly shows the lands that the applicant for a permit proposes to use or the permittee has used;

(*b*) show the scale to which the plan is drawn; and

(*c*) show locations

(i) in accordance with sections 5 to 9 of the *Canada Oil and Gas Land Regulations*, or

(ii) by giving the geographic co-ordinates thereof.

Security Deposit

36. (1) In order to ensure that a permittee complies with the terms and conditions of his permit and with these Regulations, the Engineer may include in the permit a condition that the permittee deposit with the Minister a security deposit not exceeding $100,000.

b) tiré et accompagné de clichés positifs de photographies aériennes verticales, montrant les terres sujettes à l'exploitation.

(3) L'ingénieur peut proroger d'au plus 60 jours le délai fixé pour la présentation du plan définitif, s'il reçoit une demande écrite en ce sens, d'un détenteur de permis.

(4) L'ingénieur rejette un plan définitif non conforme à cet article et à l'article 35 et, dans les trois semaines de la réception d'un avis écrit de l'ingénieur à cet effet, le détenteur de permis lui soumet un nouveau plan définitif conforme à cet article et à l'article 35.

(5) Nonobstant l'expiration d'un permis ou la présentation d'un plan définitif, le détenteur de permis est tenu de satisfaire aux obligations énoncées dans le permis ou dans le présent règlement jusqu'au moment où l'ingénieur lui délivre une lettre d'acquittement relative à l'exploitation des terres.

Établissement du droit d'utilisation des terres

34. (1) Dans les 30 jours de la délivrance par l'ingénieur d'une lettre d'acquittement, le détenteur de permis calcule le droit d'utilisation des terres d'après la superficie réelle des terres utilisées et l'ingénieur,

a) lorsque le droit d'utilisation joint à la demande de permis dépasse le montant du droit ainsi calculé, rembourse le détenteur de permis du montant excédentaire; ou

b) lorsque le droit d'utilisation joint à la demande de permis est moindre que le montant du droit ainsi calculé, réclame, par un avis écrit au détenteur de permis, le montant de la différence.

(2) Lorsqu'une demande de permis est rejetée, le droit d'utilisation est remboursé au requérant.

(3) Le droit exigé pour la demande n'est pas remboursable.

Division des terres et plans

35. Un plan provisoire ou définitif présenté selon le présent règlement

a) est établi à une échelle indiquant clairement les terres que le requérant d'un permis se propose d'utiliser ou que le détenteur de permis a utilisées;

b) indique l'échelle du plan; et

c) indique les emplacements

(i) selon les articles 5 à 9 du *Règlement sur les terres pétrolifères et gazifères du Canada*, ou

(ii) en donnant leurs coordonnées géographiques.

Dépôt de garantie

36. (1) Pour s'assurer que le détenteur de permis se conforme aux conditions de son permis et au présent règlement, l'ingénieur peut imposer comme condition qu'il dépose auprès du Ministre une garantie n'excédant pas $100,000.

(2) Where a permit includes a condition requiring a security deposit, the permittee shall not begin the land use operation until a security deposit has been deposited with the Minister.

(3) A security deposit shall be in the form of

(*a*) a promissory note guaranteed by a chartered bank and payable to the Receiver General;

(*b*) a certified cheque drawn on a chartered bank in Canada and payable to the Receiver General;

(*c*) bearer bonds issued or guaranteed by the Government of Canada; or

(*d*) a combination of the securities described in paragraphs (*a*) to (*c*).

(4) A security deposit shall be returned by the Minister when the Engineer has issued a letter of clearance in respect of the land use operation.

(5) Where a permittee has not complied with all the terms and conditions of his permit or with these Regulations, the Minister may retain such part of a security deposit as, in his opinion, the circumstances justify.

(6) Where the Minister retains all or part of a security deposit, the Minister may use all or part of the security deposit forfeited to repair or restore the land that has been damaged as a result of the land use operation.

Letter of Clearance

37. When the Engineer is satisfied that a permittee has complied with all the terms and conditions of his permit and with the provisions of these Regulations, he shall issue a letter of clearance to the permittee.

Duties and Powers of Inspectors

38. (1) It shall be a condition of every permit that the permittee shall permit an inspector, at any reasonable time, to enter any place or premises on territorial lands under the permittee's ownership or occupation, other than a private dwelling, and make such inspections as he thinks necessary to determine whether the terms and conditions of the permit or the provisions of these Regulations are being complied with.

(2) An inspector shall be furnished with a certificate of his appointment as an inspector and on entering any place or premises under subsection (1) shall, if so requested, produce the certificate.

(3) Every person in any place or premises entered by an inspector under subsection (1) shall give the inspector such assistance and furnish him with such information as the inspector may, for the purpose of carrying out his duties under these Regulations, reasonably require.

39. No person shall wilfully obstruct or hinder an inspector in carrying out his duties under these Regulations.

40. No person shall knowingly make a false or misleading statement either orally or in writing to an inspector engaged in carrying out his duties under these Regulations.

(2) Un détenteur de permis ne peut commencer l'exploitation des terres avant d'avoir déposé auprès du Ministre la garantie que le permis exige.

(3) Le dépôt d'une garantie se fait sous forme

a) de billet à ordre garanti par une banque à charte et payable au Receveur général;

b) de chèque visé tiré sur une banque à charte canadienne et payable au Receveur général;

c) d'obligations au porteur émises ou garanties par le gouvernement du Canada; ou

d) d'une combinaison des garanties décrites au alinéas *a*) à *c*).

(4) Le Ministre rembourse le dépôt de garantie lorsque l'ingénieur a délivré une lettre d'acquittement relative à l'exploitation des terres.

(5) Lorsqu'un détenteur de permis ne s'est pas conformé à toutes les conditions de son permis ou au présent règlement, le Ministre peut retenir la partie du dépôt de garantie qu'il croit justifiée dans les circonstances.

(6) Lorsque le Ministre retient, en totalité ou en partie, le dépôt de garantie, il peut l'utiliser pour remettre en bon état le terrain endommagé par l'exploitation des terres.

Lettre d'acquittement

37. Lorsque l'ingénieur est convaincu que le détenteur de permis s'est conformé aux conditions de son permis et au présent règlement, il lui délivre une lettre d'acquittement.

Fonctions et pouvoirs de l'inspecteur

38. (1) Tout permis est sujet au droit d'un inspecteur de pénétrer, à tout moment raisonnable, en un lieu ou dans des locaux situés sur des terres territoriales et dont le détenteur de permis est l'occupant ou le propriétaire, sauf dans une habitation particulière, et de faire les inspections qu'il juge nécessaires pour déterminer si les conditions du permis ou les dispositions du présent règlement sont respectées.

(2) Un inspecteur est pourvu du certificat de sa nomination comme inspecteur et il l'exhibe sur demande lorsqu'il pénètre en un lieu ou dans des locaux selon le paragraphe (1).

(3) Une personne présente en un lieu ou dans des locaux visités par un inspecteur selon le paragraphe (1) lui fournit l'aide et les renseignements qu'il peut raisonnablement exiger pour exécuter ses fonctions selon le présent règlement.

39. Nul ne peut nuire volontairement à un inspecteur dans l'exécution de ses fonctions en vertu du présent règlement.

40. Nul ne peut faire verbalement ou par écrit une déclaration fausse ou trompeuse à un inspecteur exécutant ses fonctions en vertu du présent règlement.

Suspension of a Land Use Operation

41. (1) Where an inspector is of the opinion that a permittee has failed to comply with any term or condition of his permit or any provision of these Regulations, he shall so inform the permittee and, if the default continues, the inspector may give notice to the permittee that if the default is not corrected within the time specified in the notice the inspector may order the suspension of the land use operation or any part thereof.

(2) If a permittee does not correct a default within the time specified in a notice given by an inspector under subsection (1), the inspector may order the permittee to suspend the land use operation or any part thereof and the permittee shall thereupon suspend the land use operation or part thereof until the inspector authorizes the permittee to resume the land use operation.

(3) An inspector shall authorize a permittee to resume a land use operation or part thereof suspended under subsection (2) when the inspector or the Engineer is satisfied that the default has been corrected, unless the permit has in the meantime been cancelled pursuant to section 42.

(4) Where a permittee has been informed of a default pursuant to subsection (1) or an order has been made in respect thereof pursuant to subsection (2), the Engineer may, if the permittee fails to correct the default, take such action as he deems necessary to correct the default.

(5) The costs of any action taken by the Engineer pursuant to subsection (4) may be recovered from the permittee as a debt due to the Crown.

(6) Nothing in this section relieves a permittee from prosecution for any violation of these Regulations.

(7) No order pursuant to subsection (2) shall be made in respect of an oil or gas drilling site between the time of spud-in and the rig release date without the concurrence of the district oil and gas conservation engineer.

Cancellation of Permit

42. (1) Where a land use operation has been suspended pursuant to section 41 and the permittee fails or refuses to correct his default in complying with any terms and conditions of a permit or of any provision of these Regulations, the Engineer may cancel the permit.

(2) The cancellation of a permit under subsection (1) shall not relieve the permittee from any obligation arising under the terms and conditions of the permit or under these Regulations, or from complying with any notice, direction or order given by an inspector or by the Engineer.

Discontinuance of a Land Use Operation

43. (1) Subject to subsection (2), where a permittee wishes to discontinue a land use operation at any time prior to the date of completion set out in the permit, he shall give notice of discontinuance in writing to the Engineer indicating the date upon which he proposes to discontinue the land use operation.

Suspension de l'exploitation des terres

41. (1) Lorsqu'un inspecteur est d'avis qu'un détenteur de permis ne s'est pas conformé à une condition de son permis ou à une disposition du présent règlement, il en informe le détenteur de permis et, si le manquement persiste, il peut l'aviser qu'à défaut de conformité dans le délai précisé dans l'avis, il peut suspendre une partie ou la totalité de l'exploitation des terres.

(2) Si le détenteur de permis ne se conforme pas dans le délai précisé dans l'avis donné par un inspecteur selon le paragraphe (1), l'inspecteur peut lui ordonner de suspendre une partie ou la totalité de l'exploitation des terres, et le détenteur de permis cesse alors l'exploitation jusqu'à ce que l'inspecteur l'autorise à la reprendre.

(3) L'inspecteur autorise un détenteur de permis à reprendre l'exploitation des terres suspendue selon le paragraphe (2) lorsque lui-même ou l'ingénieur s'est assuré de la correction du défaut, à moins que le permis n'ait été annulé entre-temps selon l'article 42.

(4) Si, après avis d'un défaut selon le paragraphe (1) ou réception d'un ordre selon le paragraphe (2), le détenteur de permis n'a pas remédié à la situation, l'ingénieur peut prendre les mesures qu'il juge nécessaires pour y satisfaire.

(5) Les frais des mesures prises par l'ingénieur selon le paragraphe (4) peuvent être recouvrés du détenteur de permis à titre de créance de la Couronne.

(6) Aucune disposition du présent article ne relève un détenteur de permis des poursuites dont il est passible pour violation du présent règlement.

(7) S'il s'agit du forage d'un puits de pétrole ou de gaz, aucun ordre visé au paragraphe (2) ne peut être donné entre la percée de forage et le renvoi de l'équipe, sans l'accord de l'ingénieur de district pour la conservation du pétrole et du gaz.

Annulation du permis

42. (1) Lorsque l'exploitation des terres a été suspendue selon l'article 41 et que le détenteur de permis néglige ou refuse de remédier à son défaut de se conformer aux conditions du permis ou au présent règlement, l'ingénieur peut annuler le permis.

(2) L'annulation d'un permis selon le paragraphe (1) ne dégage pas le détenteur de permis de ses obligations découlant du permis ou du présent règlement, ni de l'obligation de se conformer à un avis, à une directive ou à un ordre reçu d'un inspecteur ou de l'ingénieur.

Cessation d'un travail d'utilisation des terres

43. (1) Sous réserve du paragraphe (2), le détenteur de permis qui désire cesser l'exploitation des terres avant la date d'achèvement visée dans le permis, en donne à l'ingénieur un avis écrit, et lui indique la date prévue de la cessation.

(2) A notice of discontinuance given pursuant to subsection (1) shall be given to the Engineer at least 10 days prior to the proposed date of the discontinuance.

(3) On receipt of a notice of discontinuance, the Engineer shall amend a copy of the permit accordingly and shall forward the amended copy of the permit to the permittee.

(4) The discontinuance of a land use operation pursuant to this section does not relieve the permittee from any obligations arising under the terms and conditions of the permit or under these Regulations up to the time of discontinuance or from complying with any notice, direction or order given by an inspector or by the Engineer.

Assignment

44. (1) On receipt of an application in writing for approval of an assignment of a permit, the Engineer may approve the assignment in whole or in part.

(2) An application for approval of an assignment shall be forwarded to the Engineer at least 10 days prior to the proposed effective date of the assignment and shall include the permit number of the assignor, the name and address of the proposed assignee and particulars of the interests or rights of the assignee to be benefited by the assignment of the permit.

Appeals

45. (1) An applicant for a permit or a permittee may, within 30 days after any decision, direction or order made by the Engineer or an inspector, appeal therefrom to the Minister.

(2) An appeal referred to in subsection (1) shall be by notice in writing setting forth

(*a*) the decision, direction or order appealed from;

(*b*) the relevant circumstances surrounding the giving of the decision, direction or order; and

(*c*) the grounds of the appeal.

(3) A person appealing to the Minister pursuant to subsection (1) shall provide the Minister with such further particulars with respect to the appeal as the Minister may require.

(4) The Minister may, after receipt of an appeal pursuant to subsection (1), set aside, confirm or vary the decision, direction or order appealed from or may remit it to the Engineer for reconsideration with such instructions as the Minister deems proper.

(5) A decision, direction or order appealed from remains in full force and effect pending the decision of the Minister or an officer appointed by him pursuant to subsection (6).

(6) The Minister may authorize a senior officer of the Department of Indian Affairs and Northern Development, other than the Engineer, to exercise the Minister's powers in respect of any appeal pursuant to this section.

Notice

46. (1) Any direction, notice or order given to a permittee under these Regulations shall be sufficiently given if sent by

(2) L'avis de cessation donné selon le paragraphe (1) est donné à l'ingénieur au moins 10 jours avant la date prévue de la cessation.

(3) Sur réception de l'avis de cessation, l'ingénieur modifie une copie du permis en conséquence et la transmet au détenteur de permis.

(4) La cessation de l'exploitation des terres, selon le présent article, ne dégage pas le détenteur de permis de ses obligations découlant du permis ou du présent règlement, jusqu'à la date de cessation, ni de l'obligation de se conformer à un avis, à une directive ou à un ordre reçu d'un inspecteur ou de l'ingénieur.

Cession

44. (1) L'ingénieur peut approuver, en tout ou en partie, une demande écrite d'approbation de la cession d'un permis.

(2) La demande d'approbation de la cession est transmise à l'ingénieur au moins 10 jours avant la date prévue de la cession et indique le numéro de permis du cédant, les nom et adresse du cessionnaire et les détails des intérêts ou droits dévolus au cessionnaire par suite de la cession.

Appels

45. (1) Le requérant d'un permis ou le détenteur de permis peut, dans les 30 jours de la date d'une décision, d'une directive ou d'un ordre, reçus de l'ingénieur ou d'un inspecteur, en appeler au Ministre.

(2) L'appel visé au paragraphe (1) se fait par avis écrit exposant

a) la décision, la directive ou l'ordre faisant l'objet de l'appel;

b) les circonstances pertinentes ayant suscité la décision, la directive ou l'ordre; et

c) les motifs de l'appel.

(3) Quiconque interjette appel au Ministre selon le paragraphe (1) lui fournit les détails supplémentaires pertinents qu'il peut exiger.

(4) Le Ministre peut, après réception d'un appel selon le paragraphe (1), annuler, confirmer ou modifier la décision, la directive ou l'ordre faisant l'objet de l'appel ou le renvoyer à l'ingénieur pour révision avec les directives qu'il juge à propos.

(5) Une décision, une directive ou un ordre faisant l'objet d'un appel reste en vigueur jusqu'à la décision du Ministre ou du fonctionnaire nommé par lui selon le paragraphe (6).

(6) Le Ministre peut autoriser un haut fonctionnaire du ministère des Affaires indiennes et du Nord canadien, sauf l'ingénieur, à exercer les pouvoirs du Ministre concernant un appel selon le présent article.

Avis

46. (1) Une directive, un avis ou un ordre donné à un détenteur de permis selon le présent règlement est valablement

registered mail to, or left at, the permittee's address as stated in his application for the permit and shall be deemed to have been given to the permittee on the date it was so mailed or left.

(2) Where a direction, notice or order is given to a permittee other than in writing, it shall forthwith be confirmed in writing.

donné s'il a été expédié sous pli recommandé ou déposé à l'adresse que le détenteur de permis a déclarée dans sa demande de permis et il est censé avoir été donné au détenteur à la date de son expédition ou de son dépôt.

(2) Une directive, un avis ou un ordre donné verbalement à un détenteur de permis est immédiatement confirmé par écrit.

SCHEDULE

(s. 22)

FEES PAYABLE FOR A PERMIT

1. Application fee
   (*a*) Class A Permit $20
   (*b*) Class B Permit $10
2. Land use fee where lands proposed to be used as shown on the preliminary plan exceed 2 ha, for each ha of land in excess of 2 ha
   (*a*) $20, south of the 65th parallel of north latitude; and
   (*b*) $12, north of the 65th parallel of north latitude.

ANNEXE

(art. 22)

DROITS PAYABLES POUR UN PERMIS

1. Droit de demande de permis
   a) permis de catégorie A $20
   b) permis de catégorie B $10
2. Lorsque les terres qu'on envisage d'utiliser selon le plan provisoire ont une superficie de plus de 2 hectares, pour chaque hectare supplémentaire, un droit d'utilisation
   a) de $20, au sud du 65e parallèle de latitude nord; et
   b) de $12, au nord du 65e parallèle de latitude nord.

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Registration
SOR/82-217 8 February, 1982

TERRITORIAL LANDS ACT

Territorial Land Use Regulations, amendment

P.C. 1982-345 4 February, 1982

Whereas pursuant to sections 3.1 and 3.2 of the Territorial Lands Act, consultations have taken place with the Council of the Yukon Territory and the Council of the Northwest Territories respecting the annexed amendment to the Territorial Land Use Regulations;

And Whereas pursuant to section 19.1 of the Territorial Lands Act a copy of the annexed amendment to the Territorial Land Use Regulations was published in Part I of the *Canada Gazette* on November 14, 1981 and a reasonable opportunity was thereby afforded to all interested persons to make representations to the Minister with respect thereto.

Therefore, His Excellency the Governor General in Council, on the recommendation of the Minister of State for Economic Development and the Minister of Indian Affairs and Northern Development, pursuant to sections 3.2 and 19 of the Territorial Lands Act, is pleased hereby to amend the Territorial Land Use Regulations, C.R.C., c. 1524, in accordance with the schedule hereto.

SCHEDULE

1. (1) The heading preceding section 4 of the *Territorial Land Use Regulations* is revoked and the following substituted therefor:

"Designation of Engineers"

(2) Section 4 of the said Regulations is further amended by adding thereto the following subsection:

"(2) Where the powers, duties and functions of the Minister are transferred pursuant to section 14 of the *Northern Pipeline Act*, in relation to the pipeline only as defined in section 2 of that Act, the Minister to whom such powers, duties and functions have been transferred may designate any officer of the Northern Pipeline Agency as Engineer for the purposes of any provision of these Regulations."

Enregistrement
DORS/82-217 8 février 1982

LOI SUR LES TERRES TERRITORIALES

Règlement sur l'utilisation des terres territoriales—Modification

C.P. 1982-345 4 février 1982

Vu qu'en vertu des article 3.1 et 3.2 de la Loi sur les terres territoriales il y a eu consultation avec le Conseil du territoire du Yukon et le Conseil des territoires du Nord-Ouest concernant la modification au Règlement sur l'utilisation des terres territoriales, ci-après.

Et vu qu'en vertu de l'article 19.1 de la Loi sur les terres territoriales une copie de la modification du Règlement sur l'utilisation des terres territoriales, ci-après, a été publiée dans la Partie I de la *Gazette du Canada* du 14 novembre 1981 et qu'une possibilité raisonnable a été de ce fait accordée aux personnes intéressées pour présenter des observations au Ministre à cet égard.

À ces causes, sur avis conforme du ministre d'État chargé du Développement économique et du ministre des Affaires indiennes et du Nord canadien et en vertu des articles 3.2 et 19 de la Loi sur les terres territoriales, il plaît à Son Excellence le Gouverneur général en conseil de modifier, conformément à l'annexe ci-après, le Règlement sur l'utilisation des terres territoriales, C.R.C., c. 1524.

ANNEXE

1. (1) La rubrique qui précède l'article 4 du *Règlement sur l'utilisation des terres territoriales* est abrogée et remplacée par ce qui suit:

«Nomination des ingénieurs»

(2) L'article 4 dudit règlement est en outre modifié par adjonction du paragraphe suivant:

«(2) Lorsque les pouvoirs et les fonctions du Ministre sont transférés en vertu de l'article 14 de la *Loi sur le pipe-line du Nord* uniquement pour les fins du pipe-line tel que défini à l'article 2 de cette Loi, le Ministre à qui ces pouvoirs et fonctions sont transférés peut désigner un fonctionnaire de l'Administration du pipe-line du Nord pour agir comme ingénieur aux fins du présent règlement.»

EXPLANATORY NOTE

(This note is not part of the Regulation, but is intended only for information purposes.)

This amendment to the *Territorial Land Use Regulations* permits the Minister designated to act as the Minister for the purposes of the *Northern Pipeline Act* to designate as engineer an employee of the Northern Pipeline Agency, in relation to the pipeline only.

NOTE EXPLICATIVE

(La présente note ne fait pas partie du règlement et n'est publiée qu'à titre d'information.)

Cette modification au *Règlement sur l'utilisation des terres territoriales* permet au Ministre désigné pour agir à titre de Ministre pour les fins de l'application de la *Loi sur le pipe-line du Nord* de désigner un fonctionnaire de l'Administration du pipe-line du Nord pour exercer les fonctions d'ingénieur en ce qui a trait au pipe-line uniquement.

QUEEN'S PRINTER FOR CANADA, OTTAWA, 1982 IMPRIMEUR DE LA REINE POUR LE CANADA, OTTAWA, 1982

APPENDIX V

Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

APPLICATION FOR LAND USE PERMIT
DEMANDE DE PERMIS D'UTILISATION DE TERRES

Fees — Droit	Amount - Montant	Receipt No. — Reçu N°	Date	Class — Catégorie	No. — N°
				A____ B____	

Note ▶ If insufficient space, attach a sheet. Nota ▶ Au besoin, utiliser un feuillet supplémentaire.

1 Name & Mailing Address — Nom et adresse postale du requérant	2 Address of Head Office in Canada if incorporated. Dans le cas d'une société, adresse du siège social au Canada.

3 QUALIFICATIONS — TITRES

See sec. / Voir sec. ▶ 21

a(i) ☐ (a)(ii) ☐ (a)(iii) ☐ (b) ☐ (c) ☐

No(s) exploration permit mineral claims if applicable.
N°(s) des permis d'exploration minière, s'il en est.

4 LAND USE OPERATIONS — Describe the purpose, nature, location & extent of the operation. UTILISATION DE TERRES — Annexer un exposé du but de la nature de l'endroit et de la portée de l'opération projetée.	5 Total No. of personnel — N° total du personnel	6 Hectares

EQUIPMENT, VEHICLES AND FACILITIES – ÉQUIPEMENT VÉHICULES ET INSTALLATIONS

7 Type — Genre	8 No. — Quantité	9 Size — Dimension	10 Purpose — Usage

CONTRACTORS & SUB-CONTRACTORS – ENTREPRENEUR ET SOUS-TRAITANT

11 Names and Adresses — Noms et adresses	12 Functions — Fonctions

FUELS - COMBUSTIBLES

13 Type — Genre	14 Type & Nos. of Containers Genre et N^os de réservoirs	15 Capacity — Capacité (Litres)	16 Method to contain fuel in case of leakage Mode de retenue de combustible en cas de fuite

17 METHOD OF EMPTYING AND FILLING CONTAINERS —
MODE DE VINDANGE ET DE REMPLISSAGE DES RÉSERVOIRS

18 WASTE DISPOSAL — arrangements planned for disposal of garbage, sanitary wastes and debris.
ENLÈVEMENTS DES ORDURES — mesures prévues pour l'enlèvement des ordures des effluents sanitaires et des détritus.

19 CONTACT: Name and address of field supervisor — Nom et adresse du chef du chantier

20 TIME SCHEDULE PROPOSED DURÉE ESTIMATIVE DES TRAVAUX	21 APPLICATION FEES — DROITS DEMANDE DE PERMIS	22 LAND USE FEES (See Schedule) DROITS D'UTILISATION DE TERRES (voir annexe)	TOTAL
Start — Début Completion — Fin	$ 10.00 Class 'B' Catégorie $ 20.00 Class 'A' Catégorie	Hectares $ 20.00 $ 12.00	

Signature	(Print) Name — (écrire en lettres moulées) Nom	Title — Titre	Date

AND 52-209A (6-77) 7530-21-036-2872

APPENDIX B

ENVIRONMENTAL IMPACT STATEMENT

A REPORT ON A RECONNAISSANCE OF A SEGMENT OF
THE EASTERN TRIBUTARY OF COWLEY CREEK, YUKON.

Submitted to: Doug Gilday

By: Dan Carruthers

May 17th, 1981

A segment of the only major, eastern tributary of Cowley Creek was examined on the 16th of May, 1981. Approximately 100 meters of stream was examined in the vicinity of the Gilday residence at mile 7.0 Carcross Road, Yukon. The results of the observations made are attached.

Other segments of this tributary have been superficially examined by the author over the past 5 years. The tributary has two sources on north slopes of Mount Lorne. The southernmost source is a small tarn (< 1.0ha) at 1,250 m above sea level (asl.). The other source is possibly a spring (supplemented by ground and surface water flow) at the same elevation, 2 km to the north. These streams converge approximately 1.5 km east of the Gilday residence. The stream drops 450 meters from its sources to the Gilday residence over a straight line distance of 5.6 km (12:1). Thereafter it exhibits 55:1 gradient to its confluence with Cowley Creek, immediately to the west of mile 5.0 on the Carcross Road.

Upstream from the culvert crossing of the Carcross Road (mile 5.0) the stream generally parallels the Carcross Road about 1.0 km to the east. Much of this segment traverses open black spruce/willow and closed white spruce forest. Several beaver dams (which periodically alter the stream channel) exist 1.0 km upstream from the Carcross Road crossing. The stream channel is frequently littered with debris and fallen logs. Fish of any species have never been observed in this tributrary above the Carcross Road by local residents using the creek.

There have been no previous investigations of this tributary of Cowley Creek. However, surveys by Foothills Pipe Lines (1977) and Northern Natural Resources Services Ltd. (1978), of Cowley Creek in the vicinity of its intersection with the Alaska Highway, have yielded some data on fish species using the lower reached of this creek.

Based on these studies, five species of fish inhabit the lower reaches of Cowley Creek:

Chinnok Slamon (paar and fry)
Arctic Grayling (adult)
Longnose Sucker (adult)
Lake Chubb (juvenile and adult)
Slimy Sculpin (juvenile and adult)

A culvert at the Alaska Highway is a barrier to Chinook Salmon.

It is highly unlikely that any of the above fish species would inhabit the eastern tributary of Cowley Creek. The Gilday residence is located approximately 15 km (stream distance) upstream of the confluence of Cowley Creek with the Yukon river. Stream characteristics at this location in combination with probable barriers to fish passage (debris, beaver pond complex, culvert to Carcross Road) strongly suggest that none of the fish species previously recorded for the lower reaches of Cowley Creek would be found above the Carcross Road.

CREEK CHARACTERISTICS

Creek: Eastern upper tributary to Cowley Creek.

Location: Approximately 2.0 km east of mile 7.0 Carcross Road.

Elevation: 800 m asl.

Vegetation: Open tall shrub (willow)/closed white spruce.

Surficial Geology: Morraine

Gradient: 15:1 (100 m segment)

Creek Length

Shoreline Length: 1:1 (100 m segment) (no pools)

Breadth: 1.2 m (avg.)

Mean Depth: 12 cm (3 cross sections)

Bottom Materials: Gravel

Velocity: 1.2 m/sec.

Volume Discharge: 0.5 - 0.7 cms

Temperature: $3^{o}C$

Benthic macro-

Invertebrates: None (2 - 0.1 m^2 samples)

Overwintering Capacity: Nil

REFERENCES

Foothills Pipe Lines (South Yukon) Ltd. Jan. 1977.

A summary of fishery investigations in waterbodies within the influence of the proposed Alaska Highway Pipeline in Yukon Territory 1976 - 1977. Annex to E.I.S. Number 01, vol. 1 & 2.

Northern Natural Resource Services Ltd. Oct. 1978.

A compilation of fisheries data from waterbodies adjacent to the Alaska Highway from kilometer 1008 to kilometer 1635. Submitted to Department of Fisheries and Environment, Vancouver, B.C.

Energy, Mines and Resources Canada | Énergie, Mines et Ressources Canada

Yukon
Department of Economic Development and Tourism

REMOTE MICRO HYDRO

Final Project Summary

Canada/Yukon Conservation and Renewable Energy Demonstration Program

Project No.
3766-4-6

Date:
March, 1985

Sectors:
Residence

Project Locations:
Whitehorse

Technology:
Micro-Hydro

Jurisdiction:
Yukon

Project Manager:
Mr. D. Gilday

Status:
March 31, 1985 completion

Simple Payback:
15.5 years

Purpose:

The purpose of the project was to demonstrate the feasibility of developing a private hydro-electric project on a small stream to supply electricity for household needs and a wood working shop.

Description:

A stream with a firm flow of 1.26 cfs was dammed to generate 1.6 kW of electrical energy. The 36 volts DC is stored in lead acid batteries and inverted on demand to 110 volts AC with a 3,800 watt capacity. The electricity is transmitted to the house and shop via a #2, 3-strand wire.

Contributors:

Applicant	$7,510.65
Canada/Yukon	7,510.65
	$15,021.30

Demonstrated Benefits:

The cost of producing electricity with the micro hydro system is estimated at $.071/kWh in 1985, and projected to be $.141/kWh in 25 years. It is an alternative to two other more expensive options - tying into the present grid system or using a gasoline generator.

Further Information:

Mr. Doug Gilday, Box 4043, Whitehorse, Yukon (403) 668-4578
Mr. David Arseneault, Information Officer, Energy and Mines Branch, Economic Development and Tourism, Government of Yukon, P.O. Box 2703, Whitehorse, Yukon (403)667-5384.

Economic Analysis:

The cost of the system is calculated at $16,500. Based on a 25 year cycle, the system works out as follows

First year: $.071/kWh @1.6 kW or 14,016 kWh/year
25 year : $.141/kWh

The cost of grid connection using 1.6 kW consumption would be:

First year: $.113/kWh
25 year : $.487/kWh

After 25 years the micro-hydro system will have resulted in savings of $26,000 ($ 1984) over the cost of grid connection.

Technical Details:

Net Head: 30'	Penstock Length: 600'
Design Flow: 1.26 cfs	Estimated Power: 1.6 kW @1.26 cfs
Penstock Diameter: 8"	Transmission Length: 275'
Turbine: Solace 6" crossflow	Flume: Class 63 PVC pipe

Batteries: 3/12 V, 220 Amp Hr. lead acid, deep cycle
Generator: 36 V DC brushless, self-excited, heavy duty
Invertor : Best M36-3800 watt, solid state, 90% efficient, 15 kW surge capacity.